

Curriculum Vitae



**Prakash Nagarkatti, Ph.D.
Vice President for Research
Carolina Distinguished Professor
University of South Carolina School of Medicine
Columbia, SC 29208**

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ACADEMIC AND PROFESSIONAL INFORMATION

Education/Training:

1970	B.Sc. (Botany, Chemistry)	Karnatak University, India
1974	M.Sc. (Microbiology)	Karnatak University, India
1980	Ph.D. (Immunology)	Jiwaji University/Defense R&D Establishment, India
1981	Post-doc (Immunology)	McMaster University, Canada
1983	Research Associate (Immunology)	University of Kentucky, Lexington, KY

Appointments/Employment History:

University of South Carolina, School of Medicine, Columbia, SC:

1. Vice President for Research	2011-present
2. Associate Dean for Basic Science	2005 to 2011
3. Carolina Distinguished Professor	2008-present
4. WOC, Wm. Jennings Dorn VA Medical Center	2007 to present
5. Advisor to Vice President for Research	2005 to 2009
6. Health Sciences Distinguished Professor	2005 to 2008

Virginia Commonwealth University/Medical College of Virginia, Richmond, VA:

7. Wazeter Distinguished Professor and Scholar	2000 to 2005
8. Director, Immunotoxicology Program	2000 to 2005

Virginia Tech, Department of Biology, Division of Microbiology & Immunology, Blacksburg, VA:

9. Professor with tenure	1997 to 2000
10. Associate Professor with tenure	1991 to 1996
11. Assistant Professor	1986 to 1991

University of Kentucky School of Medicine, Lexington, KY:

- 12. Research Assistant Professor 1985 to 1986
- 13. Research Associate (Advisor: Dr. Alan Kaplan). 1983 to 1985

McMaster University Medical Center, Hamilton, Canada:

- 14. Post-doctoral fellow (Advisor: Dr. David Clark) 1981 to 1983

ACADEMIC AND ADMINISTRATIVE INTERESTS:

The primary role of a University is to provide an environment for the students at all levels that facilitates exchange of ideas, expands knowledge, cultivates personal responsibility, enriches culture and encourages service that overall leads to improved human life. Central to this mission is research and scholarly activity pursued by the faculty and students. My personal goal is to use my experience to provide leadership in a University setting to facilitate and promote research and scholarship, which would transform the University with innovative discoveries leading to enhanced knowledge and economic growth.

PREVIOUS ADMINISTRATIVE EXPERIENCE/ACCOMPLISHMENTS AT USC:

Associate Dean for Basic Science at University of South Carolina School of Medicine (2005-current):

- Brought in several grants totaling ~\$20 million in Federal Funding to pursue research at SOM
- Direct a multi-disciplinary \$ 6 million NIH Center grant application that was recently funded (<http://camcenter.med.sc.edu/>)
- Successful in accomplishing significant research growth through faculty recruitment and development of innovative programs.
- Responsible for increasing the extramural funding in Basic Science Departments. Between 2005 when I took charge to date, there has been an increase in NIH funding from ~\$4 million to over \$11 million.
- Overseeing R&D: SOM funding has increased from \$21.8 in 2004 to 43.5 million in 2009.
- Responsible for research lab space allocation, lab renovations, animal facility renovations (Received ~\$500,000 NIH grant in 2008).
- Serve on committee that administers \$ 20 million NSF statewide grant on Biofabrication.
- Developed faculty salary incentive plan to promote extramural funding.
- Started a fully funded combined M.D./Ph.D program.
- Oversee University-wide Integrated Ph.D. Program in Biomedical Sciences.
- Oversee ~\$500,000 Instrumentation Research Core Facility at the School of Medicine (SOM)
- Oversee Animal Resource Facilities at SOM.

- Initiated a New Post-baccalaureate Certificate Course at USC, the only one in the state of South Carolina.
- Established LLC (ImmuneSel) and submitted NIH STTR grant proposals.
- Fundraising: Met philanthropists to raise funds for the Center for Inflammation, prepared legislative request for \$3 million to support Center for Inflammation, met with congressmen.
- Initiated Research Development Fund from my office to promote innovative research projects and provide bridge funds to faculty.
- Initiated collaborations with VA Medical Center for faculty to apply for VA grants.
- Initiated a new summer Research Program for Medical Students (RPMS) at USC SOM

Director, NIH Complimentary Alternative Medicine (CAM) Center (2007-current):

- Currently, I serve as the Director and Principal Investigator (PI) on a **\$ 6 million** NIH (NCCAM) Center of Research Excellence in Inflammatory and Autoimmune Diseases. This Center pursues research on various plant-derived products and their anti-inflammatory properties and potential use in the treatment of autoimmune diseases (<http://camcenter.med.sc.edu/>)

Advisor to Vice-President for Research & Health Sciences, University of South Carolina, Columbia, SC (2005-2009):

I served as an Advisor to Dr. Harris Pastides, the VP for Research at USC who is currently the President of USC.

- Put together university-wide multi-disciplinary grant applications including:
 - Disease Investigation Through Specialized Clinically-Oriented Ventures in Environmental Research (DISCOVER) grant proposal to NIEHS.
 - Keck Foundation Grant to establish a Center for Immunovascular Biology
 - Building Interdisciplinary Research in Women's Health (BIRCWH)
 - Centers of Biomedical Research Excellence (COBRE) on Dietary Supplements and Inflammation.
- Submitted \$15 million C06 NCCR application as a P.I. for renovation of space for research (recommended for funding).
- Submitted \$10 million G20 NCCR application as a P.I. to renovate instrumentation and animal resource facility (recommended for funding).
- Collaborations with Clinical Research Institute, India and investments in Innovista.
- Developing Cancer Center at USC
- Research expansion at the Medical School
- Developing clinical and translational research
- Collaborations with Greenville Hospital System
- Recruitment of Centenary faculty positions
- Recruitment through Faculty Excellence Initiative (FEI)
- Recruitment of Centers of Economic Excellence (CoEE) Endowed Chairs.

- Submitted applications for SC Research Centers of Economic Excellence Endowed Professorship Program in the areas of 1) Cancer Immunotherapy and 2) Translational Biosciences Research.

Health Sciences Distinguished Professor (2005-2008) and Carolina Distinguished Professor (2008-current):

- Initiated and directed Graduate level course in Complementary and Alternative Medicine,
- Teaching Immunology Course for Medical Students
- Junior faculty mentoring
- Training graduate students and post-doctoral fellows including underrepresented minorities
- Mentoring of International Visiting Scholars and Professors

Inventor/Entrepreneur:

- I have many disclosures and patents to my credit. The discovery that cannabinoid receptor- 2 can be targeted to treat malignancies of the immune system was awarded US and International patent. It was bought by BTG.
- Initiated an LLC named ImmuneSel that works on developing novel therapeutics to treat inflammatory diseases and malignancies.
- Developed and submitted an STTR grant application to treat hepatitis using CB2-select agonists.
- I have given seminars to faculty on STTR/SBIR grants.

Details on Administrative Role at USC:

As an Associate Dean for Basic Science, I serve as the leading academic officer for the Basic Science Faculty at the School of Medicine. I play a leading role on all aspects of graduate training and research mission including faculty annual evaluation, promotion and tenure, salary incentive, space and resource allocation, etc. I oversee ~\$1,000,000 budget that provides partial support to the Instrumentation core, faculty development, and research enhancement. I am charged with accomplishing significant growth in sponsored research through faculty recruitment, program development and innovation. Examples of specific responsibilities include:

1. Oversee approval of all grants submitted by Basic Science faculty electronically through USCERA.
2. Oversee Instrumentation Resource Facility.
3. Oversee Animal Resource Facilities at SOM.
4. Oversee M.S. and Ph.D. Graduate Programs in Biomedical Sciences, Nurse Anesthesia and Genetic Counseling Programs at SOM.
5. Supervise directly 6 staff members
6. Approve Integrated Technology Asset Management System for administrative personnel on weekly basis.
7. Approve all VISA statements on monthly basis.

8. Supervise Health and Safety Office of SOM.
9. Supervise use of radioisotopes, controlled substances and select agents in SOM.
10. Established and supervised fully funded MD/PhD Program.
11. Initiated the Premedical Certificate Program
12. Oversee Space allocation.
13. Oversee laboratory and office renovations.
14. Oversee SOM Custodial and Safety Services. In 2008, awarded Collegiate Recycling Grant of \$25K from SC Dept. of Health and Environmental Control.
15. Implemented Environmental Management System
16. Oversee Basic Science faculty recruitment
17. Organize and address General Faculty Meeting for basic science faculty (sometimes including clinical faculty) 2-3 times /year
18. Oversee IACUC issues at SOM.
19. Oversee Integrated Biosciences Graduate Program across the university.
20. Meet with the Basic Science Department Chairs on a monthly basis.
21. Presentation at semi-annual new faculty orientation.
22. Evaluate Annual Faculty Planning and Evaluation document.
23. Organize summer research program for medical students.
24. Organize monthly meetings of National Center for Complementary and Alternative Medicine Center Steering Committee
25. Invite grant applications, solicited reviews and organized NIH-style Study Section meeting to review intramural grant applications.

Recent Major Institutional Assignments at USC:

- Served as a Co-Chair for Health Sciences South Carolina (HSSC) Strategic Planning Committee on Research: HSSC is a statewide entity that includes Clemson University, Greenville Hospital System University Medical Center, Palmetto Health, the Medical University of South Carolina, University of South Carolina and Spartanburg Regional Healthcare System. This is a unique public-private partnership that provides support to recruit Endowed Chairs and promote research transforming the state's economy and health status.
- Served as a Member of the Health Sciences Advisory Committee for the USC Vice President (VP) for Research and Health Sciences. This committee serves as an advisory committee to the VP in enhancing and promoting Health Sciences research at USC.
- Selected by the Vice President for Research and Health Sciences' office to serve on the Editorial Board of Breakthrough Magazine, a USC publication that highlights research.
- Selected to serve on the Southeastern Clinical and Translational Research Institute (SECTR) pilot research Program Committee. SECTR represents collaborations between 3 university-based health sciences centers creating a novel model of regional translational research focused on a target population that is largely underserved by many systems.
- Selected by the Associate Vice President for Research to serve on the University of South Carolina Research Advisory Committee.

- Served as the School of Medicine Liaison for Strategic Planning on Research Expansion
- Helped prepare and submit application for South Carolina Research Centers of Economic Excellence to fund multi-million dollar Endowed Chairs Program
- Serve on the School of Medicine Dean's Council that provides leadership to direct the Educational, Clinical and Research mission of the school.
- Serve on Innovista Faculty Advisory Council. Innovista is a \$250-million investment that integrates public and private sector research in high-tech, high-density facilities aimed at improving the state economy.
- Co-Chair: Strategic Planning on Research Expansion and collaborations between SOM and VA hospital.

Details on Service in Academia:

At Virginia Tech:

1. Biology Career Advising for undergraduate students (From 1987-2000). Advised ~25 students annually.
2. Biology Animal Care Committee (From 1987-2000).
3. Microbiology Seminar Coordinator for Spring 1987.
4. Executive/Personnel Committee, Dept. of Biology (1989-90 and 1995-96).
5. Graduate Review Committee, Dept. of Biology (1992-1994).
6. Graduate Research Advisory Committee for students registered under other advisors (1986-2000).
7. Career advisor for Physiotherapy program (1995-2000).
8. Chairperson, Teaching Enhancement Committee (1996-98).
9. Member, Animal Care Technician Selection Committee (1997).
10. Member, Graduate Student Evaluation Committee (1999-2000).
11. Radiation Safety Committee (1988 -2000).
12. Faculty Adviser to the International Students Union on behalf of Indian Students Association in 1986-87; 1992-2000.
13. SigmaXi Financial Committee (1989-90).
14. Advised students from other depts and colleges on Physiotherapy career opportunities and course requirements (1995-2000).
15. Member, Committee for Neuroscience option in Biological Sciences Initiative (1998). This committee is exploring the possibility of introducing inter-disciplinary neuroscience option as a goal of Biological Sciences Initiative.
16. Advisor, Minority Summer Research Internship Program (1998).
17. Reviewer, Graduate Research Development Program Application (1997).
18. Member, ASPIRES Grant Review Committee (1999-2000).

At Medical College of Virginia, Virginia Commonwealth University

19. VCU Provost's Planning Committee for Research on Biocomplexity (2000- 2005).
20. VCU Provost's Planning Committee for Research on Forensic Sciences (2000- 2005).
21. AD Williams Committee (2002- 2005).
22. Forensics Sciences Intern Program (2002- 2005)
23. Dean's Representative in Doctoral Defense, Dept. of Anatomy (2002).
24. Chair, Search Committee for Toxicologist (2002-2003).
25. Chair, Promotion and Tenure Committee (2003).
26. Coordinator, Forensics Sciences Intern Program (2002-2005).
27. Member, VCU Conflict of Interest Committee (2004-2005).
28. Member, Promotion Committee, Dept. of Pharmacology and Toxicology (2001-02)
29. Chair, Toxicology Faculty Search Committee, Dept. of Pharmacology and Toxicology (2002)
30. Director, Toxicology Program
31. Rotation Graduate Students Trained at MCV:
 - a. Amber Shinde (Fall 2000)
 - b. Kristini Miles (Fall 2001)
 - c. Naglaa El-Orabi (Spring 2001)
 - d. Terry Perot (Spring 2001)
 - e. Richard Morgan (Fall 2002)

At USC:

32. Member, Clinical Research Institute Advisory Board, USC SOM (2005-2005).
33. Member, VA Research & Development (R&D) ACOS Search Committee (2007-.
34. Member, Research Advisory Committee, USC 2005-.
35. Member, USC SOM Executive Committee, 2005-.
36. Member, USC SOM Curriculum Committee, 2005-.
37. Member, USC SOM Advisory Board, Clinical Research Institute 2005-.
38. Member, Search Committee for faculty recruitment, Environmental Toxicology , USC School of Public Health, College of Engineer and SOM. 2007-.
39. Member, Internal Advisory Committee for Colon Cancer COBRE, USC.
40. Member, Editorial Board of Breakthrough magazine of USC.
41. Member, USC Research Equipment Program.
42. Chair of Search Committee for CoEE Endowed Chair faculty position in Inflammation and Vision Research.
43. Chair of Search Committee for Inflammation faculty positions.
44. Chair of Search Committee for Cancer Immunology faculty position.
45. Member, Pathology Faculty Search Committee.
46. Chair, HIV/AIDS Faculty Search Committee.
47. Member, Center of Economic Excellence Endowed Chair Search Committee
48. Member, Dept. of Pathology, Microbiology and Immunology FEI Search Committee

PROFESSIONAL SERVICE:

I have served on over 60 NIH Study Sections in the last 10 years. I have served as regular member of NIH Study Section, Innate Immunity and Inflammation (2004-2008), and currently

serving as a regular member on Integrative and Clinical Endocrinology (2011-2015). I have also been selected as a member of College of Reviewers by NIH. Additionally, I have also Chaired NIH Study Section meetings. I also take active part in professional society activities such as American Association of Immunologists (AAI) and Society of Toxicology (SOT). I have served as a consultant to Federal Agencies such as FDA and was responsible for preparing white paper on topics such as Vasculitis. I have served on the Editorial Boards of journals, served as a reviewer and have been invited to write review articles on a wide range of topics. I have served as a Chair and a Keynote Speaker at several national and International Meetings and have been invited to give talks at various universities. I have also appeared on TV and news media and provided expert opinion in my areas of interest. Below are some highlights:

- Member, College of Reviewers, NIH 2010-2012.
- Member, NIH Study Section: Integrative and Clinical Endocrinology (2011-2015).
- Chair, NIH Study Section, ZAT1 SM (19), Dietary Supplement Research Centers: Botanicals (P50), 2010.
- Chair, NIH Study Section ZAT1 SM(14) NCCAM Botanical Centers, 2010.
- Regular Member, NIH Study Section, Innate Immunity and Inflammation, 11/2004-2010.
- Member, NIH Study Section, Innovative therapies and Clinical Studies for Screenable Disorders, NICHD, 2009.
- Member, NIH Study Section, ZAT1 SM 13, Mechanisms of Immune Modulation, NCCAM, 2009.
- Member, NIH, Systemic Injury by Environmental Exposure (SIEE): ZRG1 DKUS C 90S), 2009.
- Member, NIH, ZES1 JAB-G (R3) Review panel on NIEHS ONES grants, 2009.
- Invited to serve as Chair at the NCCAM Centers meeting to discuss challenges of translating CAM research to clinical CAM research, April 2009.
- Member, NIH, Special Emphasis Panel NCCAM RFA-AT-07-004 Mechanisms of Immune Modulation, 2009.
- Member, NIH, Review of Superfund Basic Research and Training Program (P42), 2008.
- Member, NIH. NCCAM, Mechanisms of Immune Modulation. ZAT1 SM(10), 2008.
- Member, NIEHS Special Review Panel ZES1 JAB-C (S7) P. 2007.
- Member, NIH Study Section. NCCAM Centers of Excellence for Research on Complementary and Alternative Medicine. 2004-2006.
- Member, NIH, Immunology IRG: Transplantation, Tolerance and Tumor Immunology Study Section, 2004.
- Chairperson, NIH Study Section: ZRG1 IMM-F, Topics in Inflammation and Immunotoxicology, 2004.
- Reviewed grants for the VA, 2007.
- Member, Florida Department of Health Review Panel 2004.
- Member, NIH Study Section. NCCAM Centers of Excellence for Research on Complementary and Alternative Medicine (CERC), ZATCP (15), 2004.
- Member, NIEHS grant review panel for K02 award, 2004.
- Member, NIH Study Section, ZRG1 DIG F 02 S, Special Emphasis Panel, Immuno and Developmental Toxicology, 2004.
- Member, NIH, Alcohol and Toxicology 4 (ALTX-4) Study Section 2004.

- Member, NIH, ZRG1 ENR: Endocrinology and Reproductive Sciences Study Section, 2003.
- Member, NIH, NCI Subcommittee E-Cancer Epidemiology, Prevention & Control Study Section, 2003.
- Member, NIH, ZAG1 ZIJ-8, Reverse Site Visit, U. Penn–Lymphocyte homeostasis and regulation during aging. 2003.
- Member, NIH Study Section, National Center for Complementary and Alternative Medicine NCCAM, ZAT1 CP; 2003.
- Member, Grant Review Committee, Florida Biomedical Research Grant Program, Florida Dept. of Health, 2003.
- Member, NIH Alcohol and Toxicology 1 Study Section 2002.
- Member, Expert Working Group on Biomarkers of Vasculitis, Nonclinical studies Subcommittee of Advisory Committee of Pharmaceutical Sciences, Food and Drug Administration 2001- 2005
- Member, Scientific Review Group for Toxicogenomics Research Consortium, NIEHS, 2001
- Member, Leukemia, Immunology and Blood Cell Component Study Section, American Cancer Society 2000-01
- Member, Immunology Study Section, American Cancer Society Research Grants 1996-2000
- Member, Human Immunology Center of Excellence Special Review Panel, NIH (1999)
- Member, NIH Program Project Site Visit (1990)
- Reviewer for USDA (Animal Health and Diseases) grants.

Other Professional Service:

1. Book reviewer:
 - a. *Thymus for In Focus*, IRL Press and Association of the British Society for Immunology.
 - b. *Biology: Concepts and Applications*, Second Edition. Cecie Starr, ed., Wadsworth Publishing Company, CA.
 - c. *Basic Immunology*, Wadsworth Publishing Co., CA
 - d. *Metchnikoff and the Origins of Immunology: From Metaphor to Theory*, Ed. Tauber, A. I. and Chernyak, L., Oxford Press, NY, 1991.
 - e. *Molecular Aspects of Aging*. Ed. K Esser and G. M. Martin. Wiley, New York, 1995.
2. Invited Book Chapters/Reviews written:
 - a. Use of cannabinoids as a novel therapeutic modality against autoimmune hepatitis, by Rupal Pandey, Venkatesh Hegde, Narendra Singh, Lorne Hofseth, Uday Singh, Swapan Ray, Mitzi Nagarkatti and Prakash Nagarkatti, 2008
 - b. Evaluating Apoptosis in Immunotoxicity Testing, by Sadiye Rieder, Prakash Nagarkatti and Mitzi Nagarkatti, In *Methods in Molecular Biology*, Humana Press (a division of the Springer Publishing Group) book series.
 - c. Cannabinoids and immune cell apoptosis, by Sadiye Rieder, Prakash Nagarkatti and Mitzi Nagarkatti, In Special Issue of the journal, *Immunobiology*.
 - d. Cells of the Immune Response, Prakash Nagarkatti in the *Textbook of Immunology*, ed. Mahalingam, S.

- e. Immunotherapy for Glioblastoma, Azizul Haque, Mitzi Nagarkatti, Prakash Nagarkatti, Naren L. Banik, and Swapan K. Ray, In Glioblastoma.
3. Ad hoc reviewer for Journals on several occasions:
 - a. Journal of Immunology
 - b. International Journal of Immunopharmacology
 - c. Journal of Leukocyte Biology
 - d. International Journal of Cancer
 - e. Journal of Immunotherapy
 - f. Proc. Soc. Exp. Biol. Med.
 - g. Journal of Toxicology and Environmental Health
 - h. Cellular Immunology
 - i. Toxicology and Applied Pharmacology
 - j. Toxicological Sciences
 - k. Cancer Research
 - l. Molecular Pharmacology
 - m. Toxicology Letters
 4. Chairperson at the Tumor Immunology Session of the 10th Annual Conference of Cancer Researchers in Virginia, American Cancer Society (1990), 14th Annual Conference of Cancer Researchers of Virginia, American Cancer Society (1994), 19th Annual Conference of Cancer Researchers of Virginia, American Cancer Society (1999) and at the 21st Annual Conference of Cancer Researchers of Virginia, American Cancer Society (2001).
 5. Chairperson at the platform session on TCDD at the 40th Annual Meeting of the Society of Toxicology, San Francisco, 2001
 6. Organizing committee of the 10th, 14th Annual Conference of Cancer Researchers of Virginia, American Cancer Society.
 7. Chairperson, Medical Sciences Session of the Virginia Academy of Sciences Meeting (1998).
 8. Reviewer of tenure/promotion for University of Kentucky.
 9. Membership Committee, Immunotoxicology, Society of Toxicology 2001-02
 10. Member, Expert Working Group on Biomarkers of Vasculitis, Nonclinical studies Subcommittee of Advisory Committee of Pharmaceutical Sciences, Food and Drug Administration 2001- 2004
 11. Society of Toxicology, Education Committee, Immunotoxicology, 2001-present.
 12. Member, Special Interest Groups Task Force, Society of Toxicology (2005- present)
 13. Established the Association of Scientists of Indian Origin (ASIOA) at the national Society of Toxicology
 14. Awards Committee, Immunotoxicology, Society of Toxicology (2003-2004).
 15. Reviewer of tenure/promotion for New York University, 2004.
 16. Host Committee, national meeting of American Society of Neurochemistry, Charleston, 2009.

Awards and Recognition:

1. Won National Award for Young Scientists (1981). Awarded by Indian National Science Academy.
2. Invited speaker at the workshop on autoreactive T cells at 7th International Conference of Immunology, 1989.
3. Award of \$ 1000 for the best research contribution at 6th International Congress of Mucosal Immunology, Tokyo, Japan (1990), awarded by the President of the Congress.
4. Invited participant at the NATO conference held in Greece, 1991. Awarded \$ 500.
5. Speaker at the plenary session of the 1st International Conference on Immunorehabilitation, Russia, 1994.
6. Awarded Faculty Fellowship by Associated Western Universities and Dept. of Energy to pursue research at Battelle Pacific Northwestern Labs, Richland, WA, summer, 1994.
7. Paper selected for special recognition at the 9th International Conference on Molecular Biology of Hematopoiesis, Genoa, Italy, June 1995.
8. Carl Smith Merit Award for paper presented in the Mechanisms Category at the Society of Toxicology Meeting, Cincinnati, 1997.
9. Recipient of Shelton Horseley Award, the highest award from Virginia Academy of Sciences for research (1997).
10. Outstanding Teacher Award (1999), Dept. of Biology, Virginia Tech.
11. Award for Outstanding Publication of the Year 2000 at the Immunotoxicology Specialty Section of the Society of Toxicology. Kamath, A. B., Camacho, I., Nagarkatti, P. S. and Nagarkatti, M. Role of Fas-Fas ligand interactions in 2, 3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)-induced immunotoxicity. *Toxicol. Appl. Pharmacol.* 160:141-155, 1999.
12. Selected for Award in the Mechanisms Specialty Section at 41st Annual Meeting of the Society of Toxicology, Nashville, 2002. Do, Y., Ryu, S., Nagarkatti, M. and Nagarkatti, P. S. Role of Fas-FasL interactions in estradiol-induced thymic atrophy and apoptosis.
13. First Place Award in the In Vitro Specialty Section. at 41st Annual Meeting of the Society of Toxicology, Nashville, 2002. Brown, N.C., Nagarkatti, M. and Nagarkatti, P. S. Diethylstilbestrol induced apoptosis in lymphomas and leukemias: Role of Fas ligand upregulation.
14. First Place Award in the Regulatory and Safety Evaluation Specialty Section at 41st Annual Meeting of the Society of Toxicology, Nashville, 2002. Lombard, C.A., McKallip, R. J., Nagarkatti, M. and Nagarkatti, P. S. Ligand of cannabinoid receptors leads to induction of apoptosis in transformed immune cells.
15. Camacho, I.A., Nagarkatti, M. and Nagarkatti, P.S. Effect of 2,2,7,8-tetrachlorodibenzo-p-dioxin (TCDD) on the immunological status of C57BL/6 pregnant mice. Annual Meeting of Society of Toxicology, Salt Lake City, 2003. (1st Place Award at the Immunotoxicology Specialty Section, 3rd Place Award at Developmental Specialty Section)
16. Selected as one of 3 finalists for the SOT Graduate Fellowship Award, Annual Meeting of Society of Toxicology, Salt Lake City, 2003. Do, Y., Nagarkatti, M. and Nagarkatti, P.S. DES mediates apoptosis in hematopoietic stem cells and developing thymocytes leading to immune dysfunction.
17. Selected for travel award, Annual Meeting of Association of Immunologists, Denver, 2003. McKallip, R.J., Fisher, M., Szakal, A.K., Gunthert, U., Nagarkatti, P.S. and Nagarkatti, M. The role of CD44v7 exon in IL-2 induced endothelial cell injury and vascular leak syndrome.
18. Served on a large number of NIH Study Section panels as well as other Govt agencies including USDA, EPA, FDA and Florida DHS.

19. Chairperson, NIH Study Section: ZRG1 IMM-F (04), Topics in Inflammation and Immunotoxicology. 8-10-2004.
20. Chairperson, SOT Symposium on Role of AhR in cell growth and apoptosis, 2005.
21. Selected for Travel Award. Hegde, V.L., Hegde, S., Nagarkatti, M. and Nagarkatti, P. Mast-cell dependent neutrophil chemotaxis induced by cannabinoids is mediated by CB1 and CB2 receptors. Society of Neuroimmunopharmacology Meeting, Salt Lake City, 2007.
22. Hegde, V.L., Hegde, S., Nagarkatti, M. and Nagarkatti, P. Delta-9-tetrahydrocannabinol-induced peritoneal infiltration of neutrophils is mast-cell dependent. Society of Toxicology Annual Meeting, Charlotte, March 2007. (Best paper award from Immunotoxicology Specialty Section).
23. Award for Outstanding Publication of the Year 2000 at the Immunotoxicology Specialty Section of the Society of Toxicology. Kamath, A. B., Camacho, I., Nagarkatti, P. S. and Nagarkatti, M. Role of Fas-Fas ligand interactions in 2, 3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)-induced immunotoxicity. *Toxicol. Appl. Pharmacol.* 160:141-155, 1999.
24. Invited Speaker, Cannabinoids Session, Annual Meeting of Experimental Biology, 2007, Washington, DC)
25. Featured Article, American Cancer Society Newsletter (Regional and National), 2007.
26. Camacho I, Singh, N, Hegde, VL, Nagarkatti M, Nagarkatti PS. Treatment of mice with 2,3,7,8-tetrachlorodibenzo-p-dioxin leads to aryl hydrocarbon receptor-dependent nuclear translocation of NF-kappaB and expression of Fas ligand in thymic stromal cells and consequent apoptosis in T cells. *J Immunol.* 175:90-103, 2005. This publication won the Best Paper of the Year, Immunotoxicology Specialty Section at the Annual Society of Toxicology Meeting, 2007.
27. McKallip, R.J., Jia, W., Schlomer, J., Nagarkatti, P.S., Nagarkatti, M. Cannabidiol-induced apoptosis in human leukemia cells: A novel role of cannabidiol in the regulation of p22 *phox* and Nox4 expression. American Association for Cancer Research Meeting, Washington, DC, 2006. (Selected for travel award)
28. Zhou, J., Nagarkatti, P., Zhong, Y and Nagarkatti, M. Association between *CD44* polymorphism and breast cancer. American Association of Immunologists Meeting, 2008 (Selected for travel award).
29. Chair, Scientific Session on Apoptosis at the Society of Toxicology Annual National Meeting, 2006.
30. Mann, B., Ramakrishnan, R., Nagarkatti, P., Nagarkatti, M., and Sriharan, S. Cannabidiol mediates immunosuppression by inducing apoptosis in splenocytes. ABRCMS (Annual Biomedical Research Conference for Minority Students), Atlanta, 2006. Presented at Annual Meeting of the American Society of Plant Biologists, Boston, Massachusetts August 5-9, 2006. Selected for Travel Award.
31. Interviewed by several news organizations including the BBC World Service, CBS radio station in New York, and several news papers for my work on cannabinoids and their role in autoimmune diseases and cancer (2010).
32. Featured in a one hour PBS documentary, "Clearing the Smoke: The Science of Cannabis" in which I interpreted my research findings to the common public and discussed how cannabinoids produced in our own body may help treat certain chronic inflammatory diseases and cancer (2011).

RESEARCH AND SCHOLARSHIP

Summary of Research Funding: Currently, I serve as a Director for the NIH-funded Center for Inflammation and Autoimmunity. This is a \$6 million, 5 year grant that was funded in 2007. In addition, since moving to USC in 2005, I served as a PI on an additional 3 NIH R01 grants and Co-PI on 3 other NIH R01 grants bringing in ~ \$9 million. These seven grants have brought in a total of > \$15 million. Recently, I was awarded a new NIH R01 grant for \$1.6 million for 5 years and one of my pending grants has received a score of 6 percentile and is likely to be funded. My lab has been continuously funded by extramural grants for over 25 years by numerous Federal and non-Federal funding agencies including NIH, NSF/EPA, American Cancer Society, Jeffress Foundation and Lupus Foundation. I have led Program projects, Center grants, Training grants, and other large multi-disciplinary grants involving more than 5 different colleges and units.

Grants Currently/Recently Funded:

- 1) 2007-2012 National Institute of Health (NIH). P01 AT003861. Center for CAM Research on Autoimmune and Inflammatory Diseases. Principal Investigator (P.I.) Total costs \$6 million. The Center consists of 3 projects and 2 cores (In addition to being the P.I. on the Center Grant, also P.I. on Administrative Core and Project 1: Use of Resveratrol to treat Experimental Autoimmune Encephalomyelitis; CoI on Project 3: Anti-inflammatory mechanisms of American Ginseng in colitis).
- 2) 2010-2015 National Institute of Health (NIH). 1R01ES019313. T cell-estrogen interactions. Multiple P.I. Total costs ~\$1.6 million.
- 3) NIH R01MH094755-01. Immunopathological basis of PTSD. P.I. ~\$ 1.75 million. P.I. 2011-2016.
- 4) NIH R01 AT 006888-01. Role of natural indoles in experimental autoimmune encephalomyelitis. Co-P.I. 2011-2016. ~\$2 million.
- 5) 2009-2014 NSF. Statewide grant on Tissue Biofabrication. Role: administration from the School of Medicine. Total costs \$20 million.
- 6) 2010-2011 IVIS Spectrum Imaging System for the University of South Carolina (ARRA - S10: Shared Instrumentation Grant Program). PI: Bob Price; Total costs \$ 381491.
- 7) 2008-2011 National Institute of Health (NIH). Effects of Resveratrol on Staphylococcal Enterotoxin B Induced Vascular Leak, Principal Investigator mentoring graduate student, Sadiye Rieder. Total costs \$105,000.
- 8) 2009-2013 Center for CAM Research on Autoimmune and Inflammatory Diseases - Research Supplement to Promote Diversity in Health-Related Research; PI for minority graduate student Michael Rouse. Total costs \$160,148.
- 9) 2003-2010 NIH R01 DA 016545 Cannabinoid-induced apoptosis in T cell regulation. P.I. \$1,456,669.

10) 1999-2010 NIH RO1 ES09098. Effect of TCDD-induced apoptosis on T cells. P.I. \$1,500,000.

Grants Previously Funded:

Extramural Funding:

2002-2009 NIH R01 AI 053703. Role of CD44 in EC injury and melanoma therapy. Co-P.I. \$1,500,000 (P.I. Nagarkatti, M.)

2003-2008 NIH R01 HL058641. Endothelial cell injury by cytolytic lymphocytes. Co-P.I. \$1,456,669 (P.I. Nagarkatti, M.)

2003-2009 NIH R01 HL058300. Cytotoxic lymphocytes in acute lung injury. Co-P.I. \$1,644,169 (P.I. Nagarkatti, M.)

2007-2008 NIH. RR023589. DAKO ACIS II Image Analysis System for the University of South Carolina. (P.I. Bob Price). Investigator.

ARRA Shared Instrumentation Grant Program (\$10): BD Biosciences LSRII FACS for University of South Carolina. (P.I. Bob Price). Investigator. \$277,596

2008-2009. NIH. Animal Facilities Improvement at USC. Co-P.I. (P.I. Nagarkatti, M.) \$499,000.

1999-2005 National Institute of Health (NIH). RO1 ES09098. Effect of TCDD-induced apoptosis on T cells. *Principal Investigator*. Total cost - \$893,350.

2001-2004 NIH R21DA014885 Cannabinoid-induced apoptosis in immune cells. \$290,000. Co-PI.

1986-89 National Institute of Health (NIH) – R23 CA 45010. Title: Regulatory helper cell networks. *Principal Investigator*. Total cost - \$155,863.

1986-89 NIH – R23 CA 45009. Title: Immune mechanisms in nitrosourea-induced tumor rejection. *Co-Principal Investigator*. Total cost - \$152,248.

1987-91 NIH – R29 CA 45010. Title: Regulatory helper T cell networks. *Principal Investigator*. Total cost - \$515,025.

1987-92 NIH – R29 CA 45009. Title: Immune mechanisms in nitrosourea-induced tumor rejection. *Co-Principal Investigator*. Total cost - \$499,194.

1988 NIH Small Instrumentation Award (1988). For infrared CO₂ incubator. *Principal Investigator*. Total cost - \$5,000.

- 1988 Travel Award to present a paper at the 6th International Congress of Mucosal Immunology, Tokyo, Japan. *Principal Investigator*. Total cost - \$1,000.
- 1990 NIH Small Instrumentation Award. For DNA Thermal Cycler. *Co-Principal investigator*. Total cost - \$8,525.
- 1991 Travel Award to present a paper at the NATO Conference on "Targeting of Drugs: The Challenge of Peptides and Proteins" held in Greece. *Principal investigator*. Total cost - \$500.
- 1991-93 NIH Biomedical Research Support Grant. Role of CD44/MEL-14 in cytotoxic T lymphocyte activation. *Principal Investigator*. Total cost- \$2,500.
- 1994 Lupus Foundation of America. Mechanism of endothelial cell lysis by MRL- lpr/lpr double-negative T cells. *Principal Investigator*. Total cost- \$ 2,000.
- 1994-96 Jeffress Foundation. Role of adhesion molecules in experimental immunotherapy. *Co-Principal Investigator*. Total cost- \$26,000.
- 1994-97 American Cancer Society (#IM747). Role of adhesion molecules in cytotoxic T lymphocyte activation. *Principal Investigator*. Total cost- \$325,368.
- 1996-2001 NIH (AI01392-01). Adhesion molecules in cytotoxic T cell activation. *Coinvestigator*. Total cost - \$332,100.
- 1997-2000. National Science Foundation/Environmental Protection Agency. \$849,266. From landscape to waterscape: Integrating framework for urbanizing watersheds. *Co-Principal investigator*.
- 1998-2001. NIH (R01 HL058641). Endothelial cell injury by cytolytic lymphocytes. *Co-Principal investigator*. 1998-2001. \$474,465
- 1998-2001. NIH. Research Supplement for Underrepresented Minority Graduate Student (Ms. Iris Camacho) *Co-Principal investigator*. \$95,934
- 1999-2002. American Cancer Society Institutional Research Grant. Co-P.I. \$127,500.
- 1999-2003. Dept. of Education- McNair Scholars Program for underrepresented minorities. Faculty mentor \$190,000.
- 2000-03. NIH. Co-mentor for Dr. Rob McKallip - Postdoctoral fellowship (F32 HL10455). The role of CD44 isoforms in endothelial cell damage. \$100,848.
- 2001-03. NIH. RO1 ES09098 S1. Minority Graduate Supplement for Ms. Nicole Brown. Effect of TCDD-induced apoptosis on T cells. *Principal Investigator*. \$36,000.

2002-05.NIH. Mentor for Dr. Michael Fisher – Postdoctoral fellowship (F32ES011732). Mechanism of TCDD-induced perinatal immunotoxicity. \$128,824.

2001-04. NIH. Mentor for Ms. Iris Camacho – Minority Graduate Student fellowship (F31ES011562). Role of apoptosis in TCDD-induced immunotoxicity. \$79,428

2001-03. Egyptian Embassy Scholarship for Khaled Mohamed Abdelaal + \$10,000 for supplies.

2002. NIH. RR016964 . FACScaliber. (P. I. Dan Conrad). Investigator.

Intramural Funding:

1986-88 Virginia Tech Small grants program. Title: Autoreactive T cells and their role in Immunoregulation. *Principal Investigator*. Total cost - \$2,575.

1987 NIH Biomedical Research Support Grant (BRSR). Title: Effect of chloroquine on the immune response. *Principal Investigator*. Total cost - \$5,000.

1989 Virginia Tech Supplemental Grant. To present an invited talk at the 7th International Congress of Immunology, West Berlin. *Principal Investigator*. Total cost - \$1,000.

1990 Virginia Tech Supplemental Grant. To present a paper at the 6th International Congress of Mucosal Immunology, Tokyo, Japan. *Principal Investigator*. Total cost - \$1,000.

1991 Virginia Tech Supplemental Grant. To present the paper at the at the NATO Conference on "Targeting of Drugs: The Challenge of Peptides and Proteins" held in Greece. *Principal Investigator*. Total- \$800.

1992 Virginia Tech Supplemental Grant. To present a paper at the 8th International Congress of Immunology held at Budapest, Hungary. *Principal Investigator*. Total cost - \$1,000.

1992-93 Virginia Tech. Small grants program. Title: Role of adhesion molecules in the induction of vascular leak syndrome. *Principal Investigator* . Total cost -\$3,000.

1993 Virginia Tech Supplemental Grant to present paper at the 18th International Congress of Chemotherapy, Stockholm, Sweden. *Principal Investigator*. Total cost- \$1,300.

1994 VirginiaTech. Supplemental Grant. *Principal Investigator* . Problems associated with immunorehabilitation with IL-2: Mechanism of IL-2 mediated toxicity. Total cost - \$1,300.

1996 VirginiaTech. Supplemental Grant. *Principal Investigator*. Apoptosis induced by cytolytic T cells and reverse apoptosis mediated by tumor cells may play a crucial role in host-tumor interaction. Total cost - \$1,400.

1998 Reachout Program. A prototype web site for sharing, visualization and decision support for environmental management. \$7,500. *Co-Principal Investigator*

1998 ASPIRES, Virginia Tech. Development of innovative molecular technology for immunotherapy of cancer and immunotoxicology. *Co-Principal Investigator* \$49,853.

1998 ASPIRES, Virginia Tech, Establishment of facilities for research on cellular and molecular environmental toxicology. *Principal Investigator* \$42,500.

Grants Awarded to Undergraduate/Graduate Students:

1. *Aruna Seth* :
American Foundation for Aging Research. \$ 500.
2. *Denise Hammond*: Lupus foundation of America. \$ 2,000;
Sigma Xi \$413; Sigma Xi \$450.
3. *Mark Rhile*:
Sigma Xi, \$ 375; Sigma Xi \$ 355.
4. *Robert McKallip*:
Sigma Xi, \$ 375; Sigma Xi \$ 355.
5. *Asimah Rafi*:
Sigma Xi \$ 450; Sigma Xi \$ 400; Lupus Foundation of America \$2000; Virginia Academy
of Sciences \$1100.
6. *Mona Hassuneh*:
Sigma Xi \$ 400; Sigma Xi \$ 450.
7. *Henry Kao*:
Sigma Xi \$400.
8. *Marcus Fiadeiro*:
Sigma Xi \$600; Dept. of Biology, Virginia Tech \$300, Biological Sciences Initiative
undergraduate research \$300.
9. *Dai Do*:
Biological Sciences Initiative undergraduate research award, \$ 500.
10. *Jason Lavinder*:
Biological Sciences Initiative undergraduate research award, \$ 500.
11. *Ahmet Zeytun*:
Graduate Research Development Program Award \$600, Sigma Xi \$600.
12. *Lisa Hudson*:
Sigma Xi \$600; Waste Policy Institute, \$2500.
13. *Iris Camacho*:
Waste Policy Institute, \$1500. Biological Sciences Initiative undergraduante research award,
\$500. Sigma Xi Outstanding Undergraduate Research Award. Sigma Xi Grant-in-aid of
Research \$600. Research Internship Award, \$2,100. NIH Research Supplemental Award
\$95,934.
14. *Catherine Lombard*:
Biological Sciences Initiative undergraduante research award, \$500.
15. *Jodi Davidson*:
Sigma Xi Grant in aid of Research, \$500.
16. *Michael Rouse*: 2009-2013, NIH Center for CAM Research on Autoimmune and
Inflammatory Diseases - Research Supplement to Promote Diversity in Health-Related
Research; PI for minority graduate student Michael Rouse. Total costs \$160,148.
17. *Sadiye Reider*: NIH predoctoral fellowship. 2008-2011 Effects of Resveratrol on
Staphylococcal Enterotoxin B Induced Vascular Leak, Total costs ~\$105,000.

TEACHING & ADVISING:

I really enjoy teaching that has given me an opportunity to meet and share the excitement of imparting knowledge to the students. I have been teaching continuously for over 25 years. Currently I teach medical and graduate students. I also direct a course in Complementary and Alternative Medicine for graduate students. Here are some highlights:

- Taught at all levels: undergraduate, graduate, medical, and nurse anesthesia students.
- Initiated and directed new courses.
- Won “Outstanding Teacher of the Year Award” at Virginia Tech
- Trained over 25 graduate students, 17 postdoctoral fellows and 17 junior research faculty, who have been highly successful and gone on to work at prestigious institutions including NIH, Environmental Protection Agency, Harvard University, Duke University, Centers for Disease Control, Rockefeller, Los Alamos National Labs as well as private industry such as Novartis.
- Mentored several women and underrepresented minority undergraduate and graduate students, postdoctoral fellows and junior faculty as well as assisted them to apply successfully for NIH funding.
- Collaborated with and trained a number of international scientists from countries including Jordan, Egypt, Bermuda, S. Korea, Russia, Bosnia, Kazakhstan and more recently from Iraq, all of them supported by various agencies such as through Iraqi Scholar Rescue Program, Institute for International Education, American Council for International Education, Japanese Govt Fellowship Program, US Department of State Bureau of Educational and Cultural Affairs etc.
- Served as a faculty advisor for an international student organization at Virginia Tech.
- Actively participated in recruitment and training of minority graduate students and delivered talks at historically black colleges and universities (HBCU).
- Trained Hispanic and African American graduate students who have won numerous awards including NIH predoctoral fellowships.

Details on Teaching and Advising Experience:

1. Undergraduate Immunology Course (BIO 594) and Advanced Immunology course for graduate students (BIO/MMI 685). Team-taught at the University of Kentucky, Lexington, KY. 1983-85.
2. Immunology Lecture Course (BIOL 4701 and 4702 combined to 4704) for senior undergraduate and graduate students at Virginia Tech. Three credit hour course. Shared the teaching with a colleague in fall and winter quarters, of 1986 and 1987, Fall semester of 1988-1991 and both in fall and spring semesters of 1993-1995. Taught the entire course in spring semester every year up to 2000. Enrollment approximately 100 students per semester.
3. Immunology Lab course (BIOL 4710) for senior undergraduates and graduate students at Virginia Tech. Offered in Spring quarter of 1987 and 1988 and thereafter in Spring semester (BIOL 4714). One credit hour course consisting of 3-4 laboratory hours a week. Enrollment

- approximately 20-25 students. Shared teaching with a colleague. From spring 1995 -99, I taught the entire course in two sections.
4. Topics in Immunology (BIOL 5630, currently 6704) taught in spring 1987, 1989, 1991, fall 1993-1999 offered to graduate students at Virginia Tech. Three credit hour course. Enrollment approximately 10-15 students. Team-taught usually with 4 other Immunology faculty. Most years, I have served as the course leader.
 5. Advanced Immunol. (BIOL 5560 later merged with 6704) for graduate students at Virginia Tech. Offered in Spring 1988, 1990, 1992. Three credit hour course. Enrollment approximately 15-20 students. Team-taught with 4 other Immunology faculty.
 6. Special Study--Current Research in Immunology (BIOL 5984) in Fall 1989, Spring 1989,1990, 1994, for senior undergraduate and graduate students. One credit hour course that dealt with discussion of research papers. Enrollment 4-5 students.
 7. Cell Biol (BIOL 4984) in Fall 1992. Enrollment ~90 students. Team-taught with several faculty.
 8. Special Study--Writing grant proposals. Spring 1995. Three credit hour course. Discussion on how to write grant proposals--NIH and NSF format. Each student had to write a proposal based on NIH format. Also, how to write manuscripts, online search, critique papers and grants, etc. Enrollment 6 students.
 9. Undergraduate research (BIOL 4994). Three credit hours. Average 1-2 students/semester.
 10. Capstone Seminar in Microbiology and Immunology. Spring 1993-2000. One lecture on career opportunities in Immunology and research pursued in our lab. Also, a tour of our lab and discussion of ongoing research to the students. Furthermore, helping the students present research papers in Immunology. Enrollment ~25 students.
 11. Clinical Immunology (VMS-5064). Spring 1993-1995. Two credit hour graduate level course. Team taught with several faculty. Enrollment ~10 students.
 12. Immunology Lab. (BIOL 4714) for senior undergraduate and graduate students. One credit hour course. Enrollment ~ 36 students in two batches. Offered every fall semester at VT.
 13. Environmental Health and Toxicology for senior undergraduate and graduate students. Three credit hour course. Enrollment ~ 10 students. Offered every Fall semester. Team-taught with 4 other faculty members at VT.
 14. Trained 1-2 students for undergraduate research at VT
 15. Trained Graduate student rotation at MCV every semester.
 16. Topics in Immunotoxicology (PHTX 691). 1 credit. Enrollment ~10students. Offered spring semester at VCU (2001-2005), Course Director.
 17. Pharmacology for nurse anesthetists (PHTX 516). Team-taught. 3 credit hour course. Enrollment ~25 students. Offered spring semester at VCU (2001-2005)
 18. Advanced Immunology (MICR 636). Team-taught. 2 credit hour course. Enrollment ~15 students. Offered spring semester at VCU (2002-2005).
 19. Cellular Pharmacology (PHTX 637). Team-taught. 4 credit hour course. Enrollment ~10 students. Offered spring semester at VCU (2002)
 20. Principles of Pharmacology and Toxicology (PHTX 536). Team-taught. 2 credit hour course. Enrollment ~14 students. Offered spring semester at VCU (2002-2005)
 21. MII Pharmacology. Team-taught. Enrollment ~170 medical students. Offered spring semester (2002-2005) at VCU.
 22. Directed Research in Pharmacology. (PHTX697) . Taught graduate students as well as rotation students at VCU (2000-2005).

23. Special Topics: Immunotoxicology (PHTX691-004) for graduate students and postdocs at VCU. (2000-2005)
24. Teaching Medical Microbiology and Immunology Course for USC medical students ~80 (PAMB 650/720) from fall semester 2007 (2007-).
25. Teaching Pathology 710 Neoplasia team-taught course for USC graduate students (2008).
26. Teaching Advanced Immunology 700 course for USC graduate students (one of 2 instructors) (2008-to date).
27. Directing and Teaching Course on Complementary and Alternative Medicine 711 level course to graduate students (2008-to date).

Student Evaluations of Teaching:

1. Undergraduate Immunology Courses at Virginia Tech (BIOL 4704) : Overall rating: (From 1990), Fall 1990 =3.8; Fall 1991 = 3.6; Fall 1992 = 3.5; Spring 1993 = 3.6; Summer 1993 = 3.6; Spring 1994 = 3.6; Summer 1994 = 3.9; Fall 1994 =3.5; Spring 1995=3.7; Spring 1996 = 4; Spring 1997 = 3.9; Spring 1998 = 3.9; Spring 1999 = 3.9 (On a scale of 1-4; 1= poor; 4 = excellent)
2. Graduate Immunology Course at Virginia Tech (BIOL 5630, 5560): Overall rating: for spring 1987 = 3.9; spring 1988 = 3.9; spring 1990 = 3.8; spring 1992 = 3.8. (On a scale of 1-4; 1= poor; 4 = excellent)
3. Immunology Lab at Virginia Tech (BIOL 4714): Overall rating for Fall 1995 = 3.7. (On a scale of 1-4; 1= poor; 4 = excellent)
4. Medical Microbiology and Immunology Course at USC (PAMB 650/720): Overall rating for Fall 2007 = 4.2; Fall 2008=4.1; Fall 2009=4.4 (On a scale of 1-5; 1= poor; 5 = excellent)
5. MBIM711 Advances in CAM at USC: Overall rating 5 (On a scale of 1-5).
6. MBIM 700 Topics in Adv. Immunol at USC: Overall rating 4.67 (On a scale of 1-5).

Training undergraduate students:

1. *Gary Frazier* - (1987) Studied the T cell subpopulations in nitrosourea-treated animals.
2. *N. Rao* - (1987) Worked on the autoreactive T cell responses.
3. *Jennifer Freeman* - (1988) Worked on the lymphokine production by autoreactive T cell clones. Received an award for the best undergraduate research. Completed Ph.D. in Immunology from Johns Hopkins University.
4. *Denise Toney*-(1988) Worked on effect of nitrosoureas on anti-cancer immunity. Published a paper in Cancer Research and presented work at regional Cancer Society meetings. Completed Ph.D. in Immunology at Medical College of Virginia and currently working as a research Associate at the same institution.
5. *Virginia Chin* - (1989) From College of William and Mary, on SCHEV funds for summer '89. Worked on the effect of the pesticide, aldicarb on T cell responses.
6. *Byron Long* - (1990) Studying comparative activity of antigen-presenting macrophages and B cells. Completed M.D. from Medical College of Virginia.
7. *Nick Anounis* - (1990) Studied the effect of cyclosporin on the toxic effects of calcium ionophores on tumor cells. Completed Ph.D. in Medicinal Chemistry from Rice University.

8. *Mark Rhile* - (1991) Worked on effect of AZT on immune functions. Completed M.S. in Immunotoxicology in our lab.
9. *Henry Kao* - (1993,94) Worked on the effect of IL-2 on cytotoxic T cell activity. Awarded Sigma Xi grant. Presented a paper at the national meeting of the American Association of Immunologists, held at Atlanta 1995. The paper was chosen for oral presentation at a minisymposium. Completed honors thesis. Pursuing Ph.D. at the University of Pittsburg in Immunology with Dr. Olivera Finn.
10. *James Bright* - (1993-94). Worked on computer simulation of the immune system. Presented paper at the Annual Meeting of Cancer Researchers of Virginia, American Cancer Society, at Virginia Tech, Blacksburg, VA.
11. *Markus Fiadeiro* - (1995-1996). Worked on role of MHC on the immunotoxic effects of dioxin. Was awarded undergrad. research grant (~\$300) by the Dept. of Biology. Also, was awarded Sigma Xi grant (~\$600) and Biological Sciences Initiative Undergraduate support (\$300) by Virginia Tech. Presented a paper at the Regional American Cancer Society Meeting held at Norfolk, 1996.
12. *Seong-Houn No* - (1996-1997). Worked on effect of TCDD on NK cell function. Was awarded a grant from Biotechnology Center.
13. *Dai Do* - (1996-1997). Worked on mechanisms involved in VLS induction.
14. *Jason T. Lavinder* - (1996-1999). Worked on role of CD44 in T cell activation using CD44 knockout mice.
15. *David Scanlon* - (1997-1999). Worked on the effect of TCDD on NK cell activity. Presented paper at the Virginia Academy of Sciences Meeting (1998). Currently pursuing MD/PhD at University of Nebraska Medical School.
16. *Catherine Lombard* - (1998 - 1999). Worked on the role of CD44 in antitumor immunity.
17. *Mary Sproull*- (1999-2000). Worked on TCDD-induced upregulation of Fas Ligand gene. Completed Honors Thesis. Received grants from BSI and Sigma Xi. Presenting a paper at the Natinal Meeting of the Society of Toxicology, Philadelphia, 2000. Recipient of Daughtrey Scholarship.
18. *Laura Faulconer* (2002-2005). Working on TCDD induced apoptosis of SEA-activated T cells. Joined NC State as a Grad student to pursue PhD in Biomed Engineering.
19. *Jacqui Martin* (2002-2003). Worked on reporter gene assay development.

Training Technical Assistants:

1. Yin Zhong (2007- to present)
2. Daniel Sisco (2005-2007)
3. Shweta Hegde (2004-2007)
4. Annah Hammond (2007-2010)

Training graduate students:

1. Tim Dean (M.S.) 1987- 1989. Title of thesis: *The immunotoxic effects of aldicarb*. Published 3 papers. Currently working as an Instructor at Mountain Empire Community College, VA.
2. Aruna Seth (Ph.D.) 1987- 1990. Title of dissertation: *"Age-associated alterations in the immune system of normal and autoimmune-susceptible mice"*. Published 6 papers. Won the

- American Foundation for Aging Research fellowship of \$500 for contribution to research on aging. Currently working at Harvard University as a Research Associate.
3. Denise Hammond-McKibben (Ph.D.) 1991-1995. Title of dissertation: *Effect of homozygous lpr and gld mutations on the immune functions and induction of autoimmunity*. Awarded Sigma Xi grant-in-aid of research twice and an award from Lupus Foundation of America to carry out the research. Published 4 papers and one have been submitted. Currently working at University of Toronto as postdoctoral Research Associate.
 4. Robert McKallip (M.S.) 1991- 1993. Title of thesis: *Immunomodulatory properties of AZT used in the treatment of AIDS*. Awarded Sigma Xi grant-in-aid of research twice to carry out the research. Published 2 papers. Currently, an Assistant Prof, at MCV campus of VCU.
 5. Mark Rhile (M.S.) 1992-1995. Title of thesis: *Immunotoxicity of TCDD: Role of Fas expression and MHC phenotype on TCDD-mediated thymic atrophy and decrease in peripheral responsiveness*. Awarded Sigma Xi grant-in-aid of research twice to carry out the research. Published one paper.
 6. Mona Hassuneh (Ph.D) 1991-1996. Title of dissertation: *Role of autocrine growth factors in the tumorigenic transformation of T cells*. Awarded Sigma Xi grant, won first place in student paper competition, Virginia Acad. Sci. meeting in 1993 and 1994 as well as first place in student paper presentation at the annual meeting of Amer. Soc. Microbiol., Virginia branch, 1993. Published 5 papers. Joined as Assistant Professor, Dept. Biol. Sci., Univ. of Jordan for Sci. & Tech., Jordan.
 7. Asimah Rafi (Ph.D.) 1993-1998. Title of dissertation: *Role of adhesion molecules in T cell activation*. Awarded Sigma Xi grant twice. Has published 4 papers. Recipient of the Lupus Foundation of America Summer Fellowship (1997, 98). Received Shelton Horseley Award, the highest award from Virginia Academy of Sciences for research (1997). Second place at the Medical Sciences Session of the Virginia Academy of Sciences Meeting (1997, 98). Currently working for CDC.
 8. Sarah Pryputniewicz (M.S.) 1995-1997. Title of thesis: *Mechanism of TCDD-induced immunotoxicity: The role of cell activation in the generation of toxicity*. Awarded Sigma Xi grant. Published 1 paper. Works at Harvard Univ. as a Scientific Assistant.
 9. Ahmet Zeytun (Ph.D) 1995-1999. *Role of perforin and Fas in antitumor immunity*. Awarded Sigma Xi grant. Recipient of Graduate Research Development Program Award. Published 6 papers. Currently working as a Scientist at Los Alamos National Lab.
 10. Amjad Mustafa (M.S.) 1998-2001. *Role of CD44 in vascular leak syndrome*. Published one paper.
 11. Yoon Do (Ph.D.) 1998-2003. *Role of CD44 isoforms in apoptosis and induction of autoimmunity*. Currently working as a post-doc in Dr. Ralph Steinman's Lab at Rockefeller Univ. Published 10 papers in high impact journals.
 12. Lisa Hudson (M.S.) 1997-2002. *Immunotoxicological studies in nonmammalian species including fish and toads*. Published one paper.
 13. Jody Davidson (M.S.) 1998 -2000. *Characterization of phenotypic alterations in apoptotic cells*.
 14. Catherine Lombard (Ph.D.) 1999-2005. *Cannabinoid-induced immunomodulation*. Published 4 papers. Won numerous awards at SOT.
 15. Ayesha Carter (Ph.D.) 1999-2000. *Effect of dioxin on naïve and activated T cells*.
 16. Nicole Brown (Ph.D.) 2001 – 2005. *Role of DES in immunomodulation*. Recipient of NIH Predoctoral Fellowship for underrepresented minorities. Won numerous awards at SOT.

17. Iris Camacho (Ph.D.) 1998-2004. *Role of apoptosis in TCDD-induced immunotoxicity*. Currently employed as a scientist at EPA. Published 7 papers, won numerous awards at SOT. Won best paper of the year award from SOT. Received individual pre-doctoral NRSA award from NIH.
18. Naveen Kumar Kunaparaju 2002-2004 . *Role of Fas-FasL interactions in immunotoxicity*.
19. Louise Melencio 2003-2005. *CD44 receptor-ligand interactions in antitumor immunity*.
20. Sadiye Rieder (Ph.D.) 2007-2011. *Effect of SEB on iNKT cells*. Published 4 papers and submitted 3 manuscripts. Recipient of Biotechnology Specialty Section Award from the Society of Toxicology. Winner of 1st place award at USC Graduate Research Day and 1st place at USC SOM Newton Research Day Symposium.
21. Rupal Pandey 2007-2010. *Role of cannabinoids in graft versus host disease*. Recipient of the Explorers Club Horace Byrne Award for Outstanding Frontier Science Research by a Graduate Student at the South Carolina Academy of Science Annual Meeting, 2009.
22. Michael Rouse 2007-to present. *Role of IL-2 induced Tregs in EAE*. Recipient of NIH pre-doctoral fellowship. Recipient of an award to attend the 61st Lindau Meeting of Nobel Laureates and Students in Germany, 2011.
23. Brandon Busbee 2008-to present. *Role of indoles in T cell differentiation in colitis*
24. Ash Cabrera 2008-2010. *Potential use of Bryostatin to treat EAE*
25. Austin Jackson 2008-present. *Characterization of endocannabinoid-induced MDSC*. Recipient of 1st place award at USC Graduate Research Day.
26. Sunil Tomar 2008-present. *Role of indoles in the suppression of Graft-vs-Host Disease*
27. Jessica Sido 2009-present. *Role of cannabinoids in transplantation*.
28. David Elliot 2009-present. *Role CB receptor activation on ovarian cancer*.
29. Roshni Rao 2009-present. *Effect of cannabinoids in B cell apoptosis*.

Graduate Research Advisory Committee as a Member.

At Virginia Tech:

David Askew (Ph.D.)- Biology.
 Andrew Yurochko (Ph.D.) - Biology.
 Lynette Tobias (Ph.D.) - Veterinary Medicine.
 Margo S. Holland (Ph.D.) - Veterinary Medicine.
 Carlos Gorbea (Ph.D.) - Biochemistry.
 Keith A. Grasman (Ph.D.)- Fisheries and Wildlife Sciences
 Ahmed Sultan (Ph.D.) - College of Education.
 Sara Clary (M.S.) - Biology
 Lisa Gote (M.S.) - Biology.
 Eileen Murray (M.S.) - Biology.
 Michael Bradley (M.S.) - Biology.
 Arati Kamath (Ph.D.)-Veterinary Medicine.
 Kwame Boa - Amponsem (Ph.D.) - Poultry Science.
 Yongqun He (Ph.D.) - Veterinary Medicine.
 Iris Camacho (Ph.D.) - Veterinary Medicine
 Dawei Chen (M.S.) - Veterinary Medicine
 Michael Howard (Ph.D.)-Veterinary Medicine

Michael Fischer (Ph.D.)- Biology
Eileen Strahl (Ph.D.)-Biology
Chrissy Rabideau (Ph.D.)- Veterinary Medicine
Nicolin K. Girmes-Grieco (M.S.)- Human Nutrition Foods and Exercise Science.
Cheryl Paes (M.S.)- Human Nutrition Foods and Exercise Science.

At VCU:

Iris Camacho
Catherine Lombard
Nicole Brown
Yoon Do
Naveen Kumar Kunaparaju
Kedar Inamdar
Catriona Miller
Louise Melencio

At USC:

Rupal Pandey
Sadiye Reider
Ash Pardhanani
Michael Rouse
Brandon Busbee
Austin Jackson
Roshni Rao
Sunil Tomar
David Elliot
Jessica Sido

Training postdoctoral fellows:

1. Dr. V. Kakkanaiah - From 1987-1991. Worked on immunoregulation and autoimmunity. Published 4 papers. Currently working as a research associate at University of North Carolina, Chapel Hill.
2. Dr. S. Selvan - From 1987-88. Worked on tumor immunology and immunotoxicology. Published 3 papers. Currently working as a Research Assistant Professor at Duke University.
3. Dr. M. Manickasundari - From 1989-1990. Worked on tumor immunology and transformation of T cell clones. Discontinued due to motherhood. Published 1 paper. Currently working as Research Associate at University of North Carolina, Chapel Hill.
4. Dr. Yoon Qiu - 1998. Worked on CD44 isoforms. Currently Assistant Professor (tenure track) at University of Minnesota.
5. Dr. Mona Hassuneh – 1999-2000. Worked on mechanism of upregulation of Fas ligand in lymphoid and nonlymphoid cells following dioxin exposure. Currently Assistant Professor at Jordan
6. Dr. Robert McKallip – 1999-2003. Working on activation-induced cell death. Was supported by NIH individual postdoctoral fellowship. Currently Assistant Professor at

Virginia Commonwealth University. Currently supported by NIH Building Independent Research Careers in Women's Health.

7. Dr. Ahmet Zeytun -1999-2000. Worked on Fas and Fas ligand in anti-tumor immunity. Currently at Los Alamos National Lab.
8. Dr. Ludmilla Sharova (1999-2000). Worked in the area of immunotoxicology. Currently at NIH.
9. Dr. Michael Fisher – 2001- to present. Working on TCDD induced perinatal immunotoxicity. Supported by NIH individual postdoctoral fellowship.
10. Dr. Khaled Mohamed Abdelaal – 2001- 2002. Visiting Scientist from Assiut University, Egypt. Supported by Egyptian Embassy. Effect of methylcholanthrene on apoptosis induction in immune cells.
11. Dr. Wentao Jia – 2003-2005. Worked on cannabinoid receptor signaling.
12. Dr. Rupal Ramakrishnan—2004-2007. Working on Cannabinoid induced apoptosis.
13. Dr. Venkatesh Hegde—2003-2009. Role of immune synapse between T cells and DCs.
14. Dr. Catherine Lombard—2005-2007. Role of cannabinoids in immune suppression.
15. Dr. Hongbing Guan—2005-2009. Role of CD44 in immunoregulation.
16. Dr. Violeta Zaric---2009-2010. Use of Cannabinoids to treat Colitis.

Training/mentoring/helping junior faculty in research:

1. Dr. Byung Sook Chae, Visiting Associate Professor, 2003- 2004. From Woosuk University, S. Korea. Supported by S. Korean Govt.
2. Dr. Safat Okasha, Visiting Assistant Professor, 1998-99. Supported by Egyptian Govt. Fellowship. From Assiut University , Egypt
3. Dr. Khaled Ahmed, Visiting Clinical Assist. Prof. 2001-2002. Supported by Egyptian Govt. Fellowship from Cairo University, Egypt.
4. Dr. N. Singh, Research Assistant Professor, 2003-2008. Supported through my NIH grants.
5. Dr. Rob McKallip, Research Assistant Professor, 2003-2005. Supported through my NIH grants.
6. Dr. Maria Eugenia Ariza, Research Assistant Professor, 2005-2007. Supported through my NIH grants.
7. Dr. Juhua Zhou, Research Assistant Professor, 2005- to present. Supported through my NIH grants.
8. Dr. Lul Raka, Visiting Assistant Professor, 2007. From Prishtina University, Kosovo, supported through American Council of Education.
9. Dr. Mona Hassuneh, Visiting Assistant Dean for Developmental Affairs and Assistant Prof., University of Jordan, 2007; Supported through funds from University of Jordan.
10. Dr. Mufida Aljicevik, Visiting Assistant Professor, 2008. From University of Sarajevo. Supported through Junior Faculty Development Program of the American Council of Education.
11. Dr. Udai Singh, Research Assistant Professor, 2007- to date. Supported in part through CAM Center
12. Dr. Khalida Moussawy, Professor, Bagdad University, 2008-2009. Supported through Iraqi Scholar Fund Program.
13. Dr. Ali Imran Saeed, Division of Pulmonology Fellow, 2008-2009.

14. Dr. Hongbing Guan, Research Assistant Professor, 2009-present. Role of CD44 in immunoregulation. Supported in part through CAM Center
15. Dr. Venkatesh Hegde, Research Assistant Professor, 2009-present. Characterization of MDSC induced by THC. Supported in part through CAM Center
16. Dr. N. Singh, Research Associate Professor, 2008-present. TCDD induced immunosuppression. Supported in part through CAM Center and other NIH grants
17. Dr. Marina Lankina, 2009-2010, Visiting Scholar, supported by US Department of State Bureau of Educational and Cultural Affairs.

Membership in Professional Society Activities

1. American Association of Immunologists (AAI)
2. American Association for the Advancement of Science(AAAS)
3. Sigma Xi
4. Society of Leukocyte Biology
5. International Society for Immunopharmacology
6. Virginia Academy of Sciences
7. Society of Toxicology (SOT)
8. Society of NeuroImmunoPharmacology (SNIP)
9. International Cannabinoid Research Society of (ICRS)

Invited Talks/Seminars:

1. Texas A&M, 2010---Resveratrol as an anti-inflammaging drug Reciprocal regulation of SIRT1 and NF-kB
2. University of Montana, 2009—Complementary and Alternative Medicine
3. Pennsylvania State University, 2008—Molecular toxicology of TCDD
4. Medical College of Georgia, 2007-Cannabinoids and anti-inflammatory properties.
5. Medical University of South Carolina Hollings Cancer Center, 2006 – Cannabinoids as novel anti-cancer agents.
6. University of Texas Health Sciences Center, Houston, TX. 2006 – Use and Abuse of marijuana.
7. Use and abuse of cannabinoids: Novel emrging concepts in the treatment of inflammation and cancer. Department of Microbiology and Immunology, MCV/VCU 2004.
8. Lessons from the use and abuse of cannabinoids: Novel emerging concepts in the treatment of inflammatory diseases and cancer. Eastern Virginia Medical School, Norfolk, VA. 2004.
9. Mechanism of Endothelial Cell Injury and Vascular Leak Triggered by Cytolytic Lymphocytes. Seminar presented on 2-12-02 at the Cardiology and Physiology Research Conference at MCV.
10. Toxicology Research Program at MCV/VCU and opportunities for Graduate studies. Seminar presented at Virginia State University, 2001.
11. Invited Talk at the Symposium on “Unraveling a mystery: Mechanism(s) responsible for TCDD-induced immunotoxicology” at the 40th Annual Meeting of Society of Toxicology, 2001, San Francisco. Upregulation of FasL gene expression and enhanced activation-induced cell death as a mechanism of TCDD-induced immunotoxicity.

12. Approaches to reduce the toxicity associated with interleukin-2 therapy of cancer, 4th International Conference of the Asian Clinical Oncology Society, Bali, Indonesia. 1999.
13. Medical College of Virginia, Richmond, VA. 1999. Fas-Fas ligand interactions in anti-tumor immunity.
14. Marshall University, Huntington, WV. 1999. Induction of T cell apoptosis by TCDD
15. East Tennessee University Medical Center, Johnson City, TN. 1999. Fas-Fas ligand interactions in anti-tumor immunity.
16. Case Western University, Cleveland, OH. 1999. Role of Fas and Fas ligand in immunotherapy of tumors.
17. University of Kentucky, Lexington, KY. 1998. The good, bad and ugly side of promiscuous killing by CTL: Role of CD44, perforin and Fas ligand.
18. Rallis Research Center, Bangalore, India, 1996. Immunotoxicology, a new emerging discipline in Toxicology.
19. Battelle Pacific Northwest Labs, Richland, WA, 1994. Effect of radon on immune response in the lungs.
20. National Institute of Occupational Health and Safety, Cincinnati, 1993. Immunomodulatory properties of aldicarb.
21. College of Veterinary Medicine and University Center for Toxicology, Virginia Tech, 1993. Immunotoxicity of TCDD.
22. Wayne State University, College of Pharmacy, Detroit, 1992. Immunotoxicology of aldicarb.
23. University of Oklahoma Medical Center, Oklahoma City, 1992. TCR-independent activation of cytotoxic T lymphocytes through homing receptors.
24. Texas College of Osteopathic Medicine, Fort Worth, 1991. Characterization of double-negative T cells from autoimmune susceptible mice.
25. International Congress of Mucosal Immunology, Tokyo, Japan, 1990. Session on Lymphocytes and Lymphatic Tissue.
26. Virginia Tech, Dept. of Biochemistry, Blacksburg (1990). Immunological alterations in autoimmune susceptible MRL-lpr/lpr mice.
27. 7th International Congress of Immunology held at Berlin, 1989. Workshop on autoreactive cells and T cell networks.
28. University of Texas Medical Branch, Galveston (1989). Autoreactive T cells - A unique subset of T cells.
29. Indiana-Perdue Univ. at Indianapolis, Dept. of Biology (1986). Autoreactive T cells and immunoregulation.
30. East Carolina University Medical Center, Greeneville (1986). Nature and significance of autoreactive T cells.
31. Merrell-Dow Pharmaceuticals, Cincinnati, Ohio (1985). Role of autoreactive T cells in autoimmunity.
32. Univ. of Kentucky, Dept. of Biology (1984). Immunotoxicology.
33. McMaster University, Hamilton, Canada, Host-Resistance Program (1982). Effect of dengue virus infection on immune response of the host.
34. Toxicology Research Program at MCV/VCU and opportunities for Graduate studies. Seminar presented at Virginia State University.
35. Department of Biology, Div. of Botany and Microbiol/Immunol., Genetic tinkering offers novel solutions to study and treat diseases, 1996.

36. Department of Biology, Division of Ecology and Environmental Biology Seminar. Immunotoxicology of environmental pollutants. 1993.
37. Dept. of Biology, Transgenic animals, SCID mice with human immune system, plants producing antibodies - What will immunologists think of next? (1990).
38. Dept. of Biology, Div. of Microbiol/Immunol., On Autoimmunity, Aging and Cancer: Research from our Lab. (1988).

PUBLICATIONS:

Published ~160 peer-reviewed papers in high impact journals including *Proc. Natl. Acad. Sci. USA*, *J. Immunol.*, *J. Exp. Med.*, *Blood*, *Cancer Res.*, *J. Biol. Chem.*, *Mol. Biol. Cell.*, *J. Pharmacol. Exp. Therapeutics*, *Mol. Pharmacol.*, *PLoS ONE*, *Toxicol. Appl. Pharmacol.*, and *Tox. Sci.* A complete list of publications is included below.

Detailed Publication list (~ 150 peer-reviewed papers)

1. Singh NP, Singh UP, Singh B, Price RL, Nagarkatti M, Nagarkatti PS. Activation of aryl hydrocarbon receptor (AhR) leads to reciprocal epigenetic regulation of FoxP3 and IL-17 expression and amelioration of experimental colitis. **PLoS One**. 2011;6(8):e23522. Epub 2011 Aug 15).
2. Lombard C, Hegde VL, Nagarkatti M, Nagarkatti PS. Perinatal exposure to {Delta}9-tetrahydrocannabinol (THC) triggers profound defects in T cell differentiation and function in fetal and post-natal stages of life including decreased responsiveness to HIV antigens. **J Pharmacol Exp Ther**. 2011 Aug 11. [Epub ahead of print]
3. Singh UP, Singh NP, Singh B, Hofseth LJ, Taub DD, Price RL, Nagarkatti M, Nagarkatti PS. Role of resveratrol-induced CD11b(+) Gr-1(+) myeloid derived suppressor cells (MDSCs) in the reduction of CXCR3(+) T cells and amelioration of chronic colitis in IL-10(-/-) mice. **Brain Behav Immun**. 2011 Jul 23. [Epub ahead of print]
4. Zhou J, Nagarkatti PS, Zhong Y, Zhang J, Nagarkatti M. Implications of single nucleotide polymorphisms in CD44 exon 2 for risk of breast cancer. **Eur J Cancer Prev**. 2011 Sep;20(5):396-402.
5. Pandey R, Hegde VL, Nagarkatti M, Nagarkatti PS. Targeting cannabinoid receptors as a novel approach in the treatment of graft-versus-host disease: evidence from an experimental murine model. **J Pharmacol Exp Ther**. 2011 Sep;338(3):819-28. Epub 2011 Jun 14.
6. Liang Q, Wu Q, Jiang J, Duan J, Wang C, Smith MD, Lu H, Wang Q, Nagarkatti P, Fan D. Characterization of spartolonin B, a Chinese herb-derived compound, as a selective Toll-like receptor antagonist with potent anti-inflammatory properties. **J Biol Chem**. 2011 Jul 29;286(30):26470-9. Epub 2011 Jun 10.
7. Rieder SA, Nagarkatti P, Nagarkatti M. CD1d-independent activation of invariant natural killer T cells by staphylococcal enterotoxin B through major histocompatibility complex class II/T cell receptor interaction results in acute lung injury. **Infect Immun**. 2011 Aug;79(8):3141-8. Epub 2011 May 31.

8. Guan H, Nagarkatti PS, Nagarkatti M. CD44 Reciprocally regulates the differentiation of encephalitogenic Th1/Th17 and Th2/regulatory T cells through epigenetic modulation involving DNA methylation of cytokine gene promoters, thereby controlling the development of experimental autoimmune encephalomyelitis. **J Immunol**. 2011 Jun 15;186(12):6955-64. Epub 2011 May 6.
9. Singh NP, Singh UP, Hegde VL, Guan H, Hofseth L, Nagarkatti M, Nagarkatti PS. Resveratrol (trans-3,5,4'-trihydroxystilbene) suppresses EL4 tumor growth by induction of apoptosis involving reciprocal regulation of SIRT1 and NF- κ B. **Mol Nutr Food Res**. 2011 Aug;55(8):1207-18.
10. Hegde VL, Nagarkatti PS, Nagarkatti M. Role of myeloid-derived suppressor cells in amelioration of experimental autoimmune hepatitis following activation of TRPV1 receptors by cannabidiol. **PLoS One**. 2011 Apr 1;6(4):e18281.
11. Singh C, Kumar A, Hitchcock D, Fan D, Goodwin R, Lavoie H, Nagarkatti P, Dipette D, Singh U. Resveratrol prevents embryonic oxidative stress and apoptosis associated with diabetic embryopathy and improves glucose and lipid profile of diabetic dam. **Mol Nutr Food Res** 2011[Epub ahead of print]
12. Hegde V, Nagarkatti M, Nagarkatti P. Cannabinoid receptor activation leads to massive mobilization of myeloid-derived suppressor cells with potent immunosuppressive properties. **Eur J Immunol**. 40:3358-3371,2010. (Interviewed by BBC World News, PBS documentary on *Science of Cannabis* as well as covered by media and internet outlets including MSNBC, CBS radio station in New York, Daily Mail (UK), Boston Herald, New Scientist, etc.)
13. Ariza M, Ramakrishnan R, Singh N, Chauhan A, Nagarkatti P, Nagarkatti M. Bryostatins-1, a naturally occurring antineoplastic agent, acts as a Toll-like Receptor 4 (TLR-4) ligand and induces unique cytokines and chemokines in dendritic cells. **J Biol Chem**. 286:24-34, 2011.
14. Cui X, Jin Y, Poudyal D, Chumanevich A, Davis T, Windust A, Hofseth A, Wu W, Habiger J, Pena E, Wood P, Nagarkatti M, Nagarkatti P, Hofseth L. Mechanistic insight into the ability of American ginseng to suppress colon cancer associated with colitis. **Carcinogenesis**. 10: 1734-1741, 2010.
15. Singh N, Singh U, Nagarkatti M, Nagarkatti P. Resveratrol (3,5,4'-trihydroxystilbene) protects pregnant mother and fetus from the immunotoxic effects of 2,3,7,8-tetrachlorodibenzo-p-dioxin. **Mol Nutr Food Res**. 55: 209-219, 2011.
16. Nagarkatti M, Rieder S, Hegde V, Kanada S, Nagarkatti P. Do cannabinoids have a therapeutic role in transplantation? **Trends Pharmacol Sci**. 31:345-350, 2010.
17. Mehla R, Bivalkar-Mehla S, Zhang R, Handy I, Albrecht H, Giri S, Nagarkatti P, Nagarkatti M, Chauhan A. Bryostatins modulates latent HIV-1 infection via PKC and AMPK signaling but inhibits acute infection in a receptor independent manner. **PLoS One**. 5: e11160, 2010.
18. Zhou J, Nagarkatti P, Zhong Y, Creek K, Zhang J, Nagarkatti M. Unique SNP in CD44 intron 1 and its role in breast cancer development. **Anticancer Res**.30:1263-1272,2010.
19. Singh U, Singh N, Singh B, Mishra M, Nagarkatti M, Nagarkatti P, Singh S. Stem cells as potential therapeutic targets for inflammatory bowel disease. **Front Biosci** 2:993-1008,2010.
20. Li J, Ichikawa T, Jin Y, Hofseth L, Nagarkatti P, Nagarkatti M, Windust A, Cui T. An essential role of Nrf2 in American ginseng-mediated anti-oxidative actions in cardiomyocytes. **J Ethnopharmacol**. 130:222-230,2010
21. Hofseth L, Singh U, Singh N, Nagarkatti M, Nagarkatti P. Taming the beast within: resveratrol suppresses colitis and prevents colon cancer. **Aging** 2:183-184, 2010.

22. Zhou J, Nagarkatti P, Zhong Y, Nagarkatti M. Immune modulation by chondroitin sulfate and its degraded disaccharide product in the development of an experimental model of multiple sclerosis. **J Neuroimmunol.** 223:55-64, 2010.
23. Cui X, Jin Y, Hofseth A, Pena E, Habiger J, Chumanevich A, Poudyal D, Nagarkatti M, Nagarkatti P, Singh U, Hofseth L. Resveratrol suppresses colitis and colon cancer associated with colitis. **Cancer Prev Res** 3:549-559, 2010.
24. Nagarkatti P, Pandey R, Rieder S, Hegde V, Nagarkatti M. Cannabinoids as novel anti-inflammatory drugs. **Future Med Chem.** 1:1333-1349,2009.
25. Jin Y, Hofseth A, Cui X, Windust A, Poudyal D, Chumanevich A, Matesic L, Singh N, Nagarkatti M, Nagarkatti P, Hofseth L. American ginseng suppresses colitis through p53-mediated apoptosis of inflammatory cells. **Cancer Prev Res** 3:339-347,2010.
26. Nagarkatti M, Rieder S, Vakharia D, Nagarkatti P. Evaluation of apoptosis in immunotoxicity testing. **Methods Mol Biol.** 598:241-257,2010.
27. Singh U, Singh N, Singh B, Hofseth L, Price R, Nagarkatti M, Nagarkatti P. Resveratrol (trans-3,5,4'-trihydroxystilbene) induces silent mating type information regulation-1 and down-regulates nuclear transcription factor-kappaB activation to abrogate dextran sulfate sodium-induced colitis. **J Pharmacol Exp Ther.** 332:829-839,2010.
28. Pandey R, Hegde V, Singh N, Hofseth L, Singh U, Ray S, Nagarkatti M, Nagarkatti P. Use of cannabinoids as a novel therapeutic modality against autoimmune hepatitis. **Vitam Horm** 81:487-504, 2009. Review.
29. Guan H, Nagarkatti P, Nagarkatti M. Role of CD44 in the differentiation of Th1 and Th2 cells: CD44-deficiency enhances the development of Th2 effectors in response to sheep RBC and chicken ovalbumin. **J Immunol.** 183:172-180,2009.
30. Ichikawa T, Li J, Nagarkatti P, Nagarkatti M, Hofseth L, Windust A, Cui T. J American ginseng preferentially suppresses STAT/iNOS signaling in activated macrophages. **Ethnopharmacol.** 125:145-150,2009.
31. Rieder S, Chauhan A, Singh U, Nagarkatti M, Nagarkatti P. Cannabinoid-induced apoptosis in immune cells as a pathway to immunosuppression.. **Immunobiology.** 215:598-605,2010.
32. Pandey R, Mousawy K, Nagarkatti M, Nagarkatti P. Endocannabinoids and immune regulation. **Pharmacol Res.** 60:85-92, 2009. Review.
33. Jin Y, Kotakadi V, Ying L, Hofseth A, Cui X, Wood P, Windust A, Matesic L, Pena E, Chiuzan C, Singh N, Nagarkatti M, Nagarkatti P, Wargovich M, Hofseth L. American ginseng suppresses inflammation and DNA damage associated with mouse colitis. **Carcinogenesis.** 29:2351-2359,2008.
34. Kotakadi V, Jin Y, Hofseth A, Ying L, Cui X, Volate S, Chumanevich A, Wood P, Price R, McNeal A, Singh U, Singh N, Nagarkatti M, Nagarkatti P, Matesic L, Auclair K, Wargovich M, Hofseth L. Ginkgo biloba extract EGb 761 has anti-inflammatory properties and ameliorates colitis in mice by driving effector T cell apoptosis. **Carcinogenesis** 29:1799-1806, 2008.
35. Hegde V, Singh N, Nagarkatti P, Nagarkatti M. CD44 mobilization in allogeneic dendritic cell-T cell immunological synapse plays a key role in T cell activation. **J Leukoc Biol.** 84:134-142, 2008.
36. Hegde V, Hegde S, Cravatt B, Hofseth L, Nagarkatti M, Nagarkatti P. Attenuation of experimental autoimmune hepatitis by exogenous and endogenous cannabinoids: involvement of regulatory T cells. **Mol Pharmacol.** 74:20-33,2008.

37. Singh N, Nagarkatti M, Nagarkatti P. Primary peripheral T cells become susceptible to 2,3,7,8-tetrachlorodibenzo-p-dioxin-mediated apoptosis in vitro upon activation and in the presence of dendritic cells. **Mol Pharmacol.** 73:1722-1735,2008.
38. Ying L, Hofseth A, Browning D, Nagarkatti M, Nagarkatti P, Hofseth L. Nitric oxide inactivates the retinoblastoma pathway in chronic inflammation. **Cancer Res.** 67:9286-9293,2007.
39. Singh N, Hegde V, Hofseth L, Nagarkatti M, Nagarkatti P. Resveratrol (trans-3,5,4'-trihydroxystilbene) ameliorates experimental allergic encephalomyelitis, primarily via induction of apoptosis in T cells involving activation of aryl hydrocarbon receptor and estrogen receptor. **Mol Pharmacol.** 72:1508-1521,2007.
40. Guan H, Nagarkatti P, Nagarkatti M. Blockade of hyaluronan inhibits IL-2-induced vascular leak syndrome and maintains effectiveness of IL-2 treatment for metastatic melanoma. **J Immunol.** 179:3715-23, 2007.
41. Lombard C, Nagarkatti M, Nagarkatti P. CB2 cannabinoid receptor agonist, JWH-015, triggers apoptosis in immune cells: potential role for CB2-selective ligands as immunosuppressive agents. **Clin Immunol.** 122:259-270,2007.
42. Singh N, Nagarkatti M, Nagarkatti P. Role of dioxin response element and nuclear factor-kappaB motifs in 2, 3, 7, 8-tetrachlorodibenzo-p-dioxin-mediated regulation of Fas and Fas ligand expression. **Mol Pharmacol.** 71:145-157,2007.
43. Melencio L, McKallip R, Guan H, Ramakrishnan R, Jain R, Nagarkatti P, Nagarkatti M. Role of CD4(+)CD25(+) T regulatory cells in IL-2-induced vascular leak. **Int Immunol.** 18:1461-1471,2006.
44. Jia W, Hegde V, Singh N, Sisco D, Grant S, Nagarkatti M, Nagarkatti P. Delta9-tetrahydrocannabinol-induced apoptosis in Jurkat leukemia T cells is regulated by translocation of Bad to mitochondria. **Mol Cancer Res.** 4:549-562,2006.
45. McKallip R, Jia W, Schlomer J, Warren J, Nagarkatti P, Nagarkatti M. Cannabidiol-induced apoptosis in human leukemia cells: A novel role of cannabidiol in the regulation of p22phox and Nox4 expression. **Mol Pharmacol.** 70:897-908,2006.
46. Brown N, Nagarkatti M, Nagarkatti P. Induction of apoptosis in murine fetal thymocytes following perinatal exposure to diethylstilbestrol. **Int J Toxicol.** 25:9-15,2006.
47. Wyant T, Fisher M, McKallip R, Nagarkatti P, Nagarkatti M, Conrad D. Mouse B cell activation is inhibited by CD44 cross-linking. **Immunol Invest.** 34:399-416,2005.
48. Faulconer L, Camacho I, Nagarkatti M, Nagarkatti P. Superantigen-primed T cells exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) replicate poorly following recall encounter. **Arch Toxicol.** 80:134-145,2006.
49. Brown N, Nagarkatti M, Nagarkatti P. Diethylstilbestrol alters positive and negative selection of T cells in the thymus and modulates T-cell repertoire in the periphery. **Toxicol Appl Pharmacol.** 212:119-126, 2006.
50. Lombard C, Nagarkatti M, Nagarkatti P. Targeting cannabinoid receptors to treat leukemia: role of cross-talk between extrinsic and intrinsic pathways in Delta9-tetrahydrocannabinol (THC)-induced apoptosis of Jurkat cells. **Leuk Res.** 29:915-922, 2005.
51. Camacho I, Singh N, Hegde V, Nagarkatti M, Nagarkatti P. Treatment of mice with 2,3,7,8-tetrachlorodibenzo-p-dioxin leads to aryl hydrocarbon receptor-dependent nuclear translocation of NF-kappaB and expression of Fas ligand in thymic stromal cells and consequent apoptosis in T cells. **J Immunol.** 175:90-103, 2005.

52. Do Y, Mainali E, Nagarkatti P, Nagarkatti M. Bryostatins-1 in combination with calcium ionophore promotes the maturation of human umbilical cord-blood monocyte-derived dendritic cells capable of activating neonatal alloreactive T cells. **Cell Immunol.** 231:8-13, 2004.
53. Fisher M, Nagarkatti M, Nagarkatti P. Aryl hydrocarbon receptor-dependent induction of loss of mitochondrial membrane potential in epididymal spermatozoa by 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). **Toxicol Lett.** 157:99-107,2005.
54. McKallip R, Nagarkatti M, Nagarkatti P. Delta-9-tetrahydrocannabinol enhances breast cancer growth and metastasis by suppression of the antitumor immune response. **J Immunol.** 174:3281-3289,2005.
55. McKallip R, Fisher M, Gunthert U, Szakal A, Nagarkatti P, Nagarkatti M. Role of CD44 and its v7 isoform in staphylococcal enterotoxin B-induced toxic shock: CD44 deficiency on hepatic mononuclear cells leads to reduced activation-induced apoptosis that results in increased liver damage. **Infect Immun.** 73:50-61,2005.
56. Fisher M, Nagarkatti M, Nagarkatti P. 2,3,7,8-tetrachlorodibenzo-p-dioxin enhances negative selection of T cells in the thymus but allows autoreactive T cells to escape deletion and migrate to the periphery **Mol Pharmacol.** 67:327-335, 2005.
57. Kerns W, Schwartz L, Blanchard K, Burchiel S, Essayan D, Fung E, Johnson R, Lawton M, Loudon C, MacGregor J, Miller F, Nagarkatti P, Robertson D, Snyder P, Thomas H, Wagner B, Ward A, Zhang J; Expert Working Group on Drug-Induced Vascular Injury. Drug-induced vascular injury--a quest for biomarkers. **Toxicol Appl Pharmacol.** 203:62-87, 2005.
58. Do Y, Hegde V, Nagarkatti P, Nagarkatti M Bryostatins-1 enhances the maturation and antigen-presenting ability of murine and human dendritic cells.. **Cancer Res.** 64:6756-6765, 2004.
59. Do Y, McKallip R, Nagarkatti M, Nagarkatti P. Activation through cannabinoid receptors 1 and 2 on dendritic cells triggers NF-kappaB-dependent apoptosis: novel role for endogenous and exogenous cannabinoids in immunoregulation. **J Immunol.** 173:2373-2382,2004.
60. Camacho I, Nagarkatti M, Nagarkatti P. Effect of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) on maternal immune response during pregnancy. **Arch Toxicol.** 78:290-300,2004.
61. Fisher M, Nagarkatti M, Nagarkatti P. Combined screening of thymocytes using apoptosis-specific cDNA array and promoter analysis yields no novel gene targets mediating TCDD-induced toxicity. **Toxicol Sci.** 78:116-124, 2004.
62. Camacho, I., Nagarkatti, M. and Nagarkatti, P.S. Effect of 2, 3, 7, 8-tetrachlorodibenzo-p-dioxin (TCDD) on the immunological status of C57BL/6 pregnant mice. **Arch. Tox.** 78:290-300, 2004.
63. Do, Y., Nagarkatti, P. S. and Nagarkatti, M. The role of CD44 and hyaluronic acid (HA) in mixed lymphocyte reaction and antigen-presentation by bone marrow-derived dendritic cells **J. Immunotherapy** 27:1-12, 2004.
64. Lombard C, McKallip RJ, Hylemon PB, Nagarkatti PS, Nagarkatti M. Fas Ligand-dependent and -independent mechanisms of toxicity induced by T cell lymphomas in lymphoid organs and in the liver. **Clin Immunol.** 109:144-53, 2003.
65. Do, Y., Mckallip, R., Nagarkatti, P. and Nagarkatti, M. Combined deficiency of CD44 and Fas leads to early onset and more severe form of lymphoproliferative disease in the murine host. **Int Immunol.** 15 :1327-40, 2003.

66. McKallip, R.J., Do, Y., Fisher, M., Szakal, A.K., Gunthert, U., Nagarkatti, P. S. and Nagarkatti, M. Targeted deletion of CD44v7 exon leads to decreased endothelial cell injury and vascular leak syndrome induced by IL-2 activated cytolytic lymphocytes **J. Biol. Chem.** 278 :43818-30, 2003
67. Linzey, D.W., Burroughs, J., Hudon, L., Marini, M., Robertson, J., Nagarkatti, M., Bacon, J. P., and Nagarkatti, P. S. Role of environmental pollutants on immune functions, parasitic infections and limb malformations in marine toads and whistling frogs from Bermuda. **Int. J. Environ. Hlth. Res.** 13 :125-48, 2003.
68. Camacho, I. A., Nagarkatti, M. and Nagarkatti, P. S. 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) induces Fas-dependent activation-induced cell death in superantigen-primed T cells. **Arch. Toxicol.** 76:570-580, 2002
69. Do, Y., Ryu, S., Nagarkatti, M. and Nagarkatti, P. S. Role of death receptor pathway in estradiol-induced T cell apoptosis in vivo. **Toxicol. Sci.** 70:63-72, 2002
70. Mckallip, R., Do, Y., Nagarkatti, P. and Nagarkatti, M. Role of CD44 in activation-induced cell death: CD44 deficient mice exhibit enhanced T cell response to conventional and superantigens. **Int. Immunol.** 14:1015-1026, 2002
71. Mustafa, A., McKallip, R.J., Fisher, M., Duncan, R., Nagarkatti, P.S., Nagarkatti, M. Regulation of IL-2-induced vascular leak syndrome by targeting CD44 using HA and anti-CD44 antibodies. **J. Immunotherapy** 25:476-488, 2002
72. McKallip, R.J., Lombard, C., Fisher, M., Martin, B.R., Nagarkatti, M. and Nagarkatti, P.S.. Delta-9-tetrahydrocannabinol-induced apoptosis in the thymus and spleen as a mechanism of immunosuppression in vivo. **J. Pharmacol. Exp. Therap.** 302:451-465, 2002
73. McKallip, R.J., Lombard, C., Fisher, M., Martin, B.R., Ryu, S., Nagarkatti, P.S. and Nagarkatti, M. targeting CB2 cannabinoid receptors as a novel therapy to treat malignancies of the immune system. **Blood** 100:627-634, 2002.
74. Zeytun, A., McKallip, R.J., Fisher, M., Camacho, I, Nagarkatti, M. and Nagarkatti, P. S. Analysis of TCDD-induced gene expression profile in vivo using pathway-specific cDNA arrays. **Toxicology** 178:241, 2002.
75. Camacho, I., Hassuneh, M., Nagarkatti, M. and Nagarkatti, P. S. Enhanced activation-induced cell death as a mechanism of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)-induced immunotoxicity in peripheral T cells. **Toxicology** 165:51-63, 2001.
76. Okasha, S. A., Ryu, S., Do, Y., Nagarkatti, M. and Nagarkatti, P. S. Evidence for estradiol-induced apoptosis and dysregulated T cell maturation in the thymus. **Toxicology** 163:49-62, 2001.
77. Qiao, L., Studer, E., Leach, K., McKinsty, R., Gupta, S., Decker, R., Kukreja, R., Valerie, K., Nagarkatti, P., El Deiry, W., Molkenstin, J., Schmidt-Ullrich, R., Fisher, P.B., Grant, S., Hylemon, P.B, and Dent, P. Deoxycholic acid (DCA) causes ligand-independent activation of epidermal growth factor receptor (EGFR) and Fas receptor in primary hepatocytes: inhibition of EGFR/mitogen-activated protein kinase-signaling module enhances DCA-induced apoptosis. **Mol. Biol. Cell** 9:2629-2645, 2001
78. Camacho, I., Hassuneh, M., Nagarkatti, M. and Nagarkatti, P. S. Enhanced activation-induced cell death as a mechanism of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)-induced immunotoxicity in peripheral T cells. **Toxicology** 165:51-63, 2001.
79. Okasha, S. A., Ryu, S., Do, Y., Nagarkatti, M. and Nagarkatti, P. S. Evidence for estradiol-induced apoptosis and dysregulated T cell maturation in the thymus. **Toxicology** 163:49-62, 2001

80. Chen, D., McKallip, R.J., Zeytun, A., Do, Y., Lombard, C., Robertson, J.L., Mak, T.W., Nagarkatti, P.S. and Nagarkatti, M. CD44 deficient mice exhibit hepatitis following concanavalin A injection: Evidence for involvement of CD44 in activation-induced cell death. **J. Immunol.** 166:5889-5897, 2001
81. Zeytun, A., Nagarkatti, M. and Nagarkatti, P. S. Growth of FasL-bearing tumor cells in syngeneic murine host induces apoptosis and toxicity in Fas+ organs. **Blood** 95:2111-2117,2000
82. Rafi-Janajreh, A. Q., Chen, D., Schmits, R., Mak, T. W., Grayson, R. L., Sponenberg, D. P., Nagarkatti, M. and Nagarkatti, P. S. Evidence for the involvement of CD44 in endothelial cell injury and induction of vascular leak syndrome by interleukin-2. **J. Immunol.** 163:1619-1627, 1999.
83. Kamath, A. B., Camacho, I., Nagarkatti, P. S. and Nagarkatti, M. Role of Fas-Fas ligand interactions in 2, 3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)-induced immunotoxicity. **Toxicol. Appl. Pharmacol.** 160:141-155, 1999.
84. Bradley, M. J., Zeytun, A., Rafi-Janajreh, A., Nagarkatti, P.S. and Nagarkatti, M. Role of spontaneous and IL-2 induced NK activity in the cytotoxicity and rejection of Fas+ and Fas-tumor cells. **Blood** 92:4248-4255, 1998.
85. Rafi, A., Q., Zeytun, A., Bradley M. J., Sponenberg, D.P., Grayson, R. L., Nagarkatti, M. and Nagarkatti, P. S. Evidence for the involvement of Fas ligand and perforin in the induction of vascular leak syndrome. **J. Immunol.** 161:3077-3086, 1998
86. Pryputniewicz, S. J., Nagarkatti, M. and Nagarkatti, P. S. Differential induction of apoptosis in activated and naive T cells by 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) and its repercussion on T cell responsiveness. **Toxicology** 129:211-226, 1998.
87. Rafi, A., Nagarkatti, P. S. and Nagarkatti, M. Role of CD44 in CTL and NK cell activity. **Front. Biosci.** 3:650-656, 1998.
88. Kamath, A. B., Nagarkatti, P. S. and Nagarkatti, M. Characterization of phenotypic alterations induced by 2,3,7,8-tetrachlorodibenzo-p-dioxin on thymocytes *in vivo* and its effect on apoptosis. **Toxicol. Appl. Pharmacol.** 149: 117-124, 1998.
89. Zeytun, A., Hassuneh, M., Nagarkatti, M. and Nagarkatti, P. S. Fas-Fas ligand based interactions between tumor cells and tumor-specific CTL: A lethal two-way street. **Blood** 90:1952-1959, 1997.
90. Kamath, A. B., Xu, H., Nagarkatti, P. S. and Nagarkatti, M. Evidence for the induction of apoptosis in thymocytes by 2,3,7,8-tetrachlorodibenzo-p-dioxin *in vivo*. **Toxicol. Appl. Pharmacol.** 142:367-377, 1997.
91. Rafi, A., Nagarkatti, M. and Nagarkatti, P. S. Hyaluronate-CD44 interactions can induce murine B cell activation. **Blood** 89:2901-2908, 1997.
92. Hassuneh, M. R., Nagarkatti, P. S. and Nagarkatti, M. Evidence for the participation of IL-2 and IL-4 in the regulation of autonomous growth and tumorigenesis of transformed cells of lymphoid origin. **Blood** 89:610-620, 1997.
93. Nagarkatti, M. and Kamath, A. B. Fas-deficient mice are more resistant to TCDD-mediated apoptosis and immunotoxicity. **J. Vet. Pharmacol. Therapeut.** 20:267-268, 1997.
94. Rhile, M.J., Nagarkatti, M. and Nagarkatti, P. S. Role of Fas apoptosis in 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)-induced immunotoxicity of T cells. **Toxicology** 110:153-167, 1996.

95. Nagarkatti, M., Nagarkatti, P. S. and Brooks, A. Effect of radon on the immune system: Alterations in the cellularity and functions of T cells in lymphoid organs of mouse. **J. Toxicol. Environ. Health** 47:535-552, 1996.
96. Hassuneh, M. R., Nagarkatti, P. S. and Nagarkatti, M. Dysregulation of cytokine gene expression as a cause of T cell transformation and *in vivo* tumorigenicity. In **Molecular Biology of Hematopoiesis**, Ed. N. G. Abraham, Plenum Press, New York, pp. 565-570, 1996.
97. Hammond-McKibben, D., Rafi, A., Nagarkatti, M. and Nagarkatti, P.S.. Fas and FasL interactions in the cytotoxicity and its role in lymphoproliferative disease. In **Molecular Biology of Hematopoiesis**, Ed. N. G. Abraham, Plenum Press, New York, pp.411-416, 1996.
98. Nagarkatti, P. S. Molecular aspects of aging by K. Esser and G. M. Martin. John Wiley & Sons, NY. Book review. **J. Heredity** 1996
99. Hammond-McKibben D., Seth, A., Nagarkatti, P. S. and Nagarkatti, M. Characterization of factors regulating successful immunotherapy using tumor-specific cytotoxic T lymphocyte clone: Role of interleukin-2, cycling pattern of lytic activity and adhesion molecules. **Int. J. Cancer** 60:828-836, 1995.
100. McKallip, R., Nagarkatti, M. and Nagarkatti, P. S. Immunotoxicity of AZT: Inhibitory effect on thymocyte differentiation and peripheral T cell responsiveness to gp120 of HIV. **Tox. Appl. Pharmacol.** 131: 53-62, 1995.
101. Nagarkatti, M., Hassuneh, M., Seth, A., Manickasundari, K. and Nagarkatti, P. S. Constitutive activation of IL-2 gene in the induction of spontaneous *in vitro* transformation and tumorigenicity of a T cell line. **Proc. Natl. Acad. Sci. USA** 91:7638-7642, 1994.
102. McKallip, R., Nagarkatti, M. and Nagarkatti, P. S. Immunomodulatory properties of AZT. **Ann. NY Acad. Sci.** 65:464-466, 1993.
103. Hammond, D., Nagarkatti, P. S., Gote, L., Seth, A., Hassuneh, M. and Nagarkatti, M. Double-negative T cells from MRL-lpr/lpr mice mediate cytolytic activity when triggered through adhesion molecules and constitutively express perforin gene. **J. Exp. Med.** 178:2225-2230, 1993.
104. Nagarkatti, M., Hassuneh, M., Seth, A. and Nagarkatti, P. Inhibition of tumorigenicity of an *in vitro* transformed T cell clone using antibodies against interleukin-2 and interleukin-2 receptors. In **Recent Adv. Chemotherapy**, ed. Einhorn, J., Nord, C.E. and Norrby, S.R. p998-999, 1993, American Society of Microbiology, Washington, DC.
105. Nagarkatti, P. S., Hammond, D., Seth, A. and Nagarkatti, M. Role of adhesion molecules in successful immunotherapy of cancer. In **Recent Adv. Chemotherapy**, ed. Einhorn, J., Nord, C.E. and Norrby, S.R. p999-1001, 1993, American Society of Microbiology, Washington, DC.
106. Kakkanaiah, V. N, Nagarkatti, P. S. and Nagarkatti, M. Murine lymphocytes exhibit heterogeneity in their proliferative responsiveness to calcium ionophore. **Cell. Mol. Biol.** 38:533-543, 1992.
107. Nagarkatti, P. Metchnikoff and the Origins of Immunology: From Metaphor to Theory. Ed. Tauber, A. I. and Chernyak, L., Oxford Press, NY, 1991 - Book review. **J. Heredity** 83:319, 1992.
108. Seth, A., Gote, L., Nagarkatti, M. and Nagarkatti, P. S. T cell receptor independent activation of cytolytic activity of cytotoxic T lymphocytes mediated through CD44 and gp90^{MEL-14}. **Proc. Natl. Acad. Sci. USA** 88:7877-7881, 1991.

109. Kakkanaiah, V. N., Nagarkatti, M., Bluestone, J. A. and Nagarkatti, P. S. CD4-CD8- thymocytes from MRL-lpr/lpr mice exhibit abnormal proportions of $\alpha\beta$ and $\gamma\delta$ TCR⁺ cells and demonstrate defective responsiveness when activated through the TCR. **Cell. Immunol.** 137:269-282, 1991.
110. Selvan, R. S., Nagarkatti, P. S. and Nagarkatti, M. Characterization of T lymphocyte clones isolated from BCNU-cured LSA mice. **Int. J. Cell Cloning** 9:594-605, 1991.
111. Nagarkatti, M., Clary, S., Seth, A. and Nagarkatti, P. S. Tumor-infiltrating CD4⁺ T cells exhibit the lymphokine-secretory and functional properties of Th1 cells. In **Frontiers of Mucosal Immunology**, ed. Tsuchiya, M. et al., vol. 1, p 465, 1991. Elsevier Science Publishers, Amsterdam.
112. Nagarkatti, P.S., Kakkanaiah, V.N. and Nagarkatti, M. CD4-CD8- thymocytes from MRL-lpr/lpr mice exhibit abnormal proportions of $\alpha\beta$ and $\gamma\delta$ -TCR⁺ cells and demonstrate defective responsiveness when activated through the TCR. In **Frontiers of Mucosal Immunology**, ed. Tsuchiya, M. et al., vol. 1, p143, 1991. Elsevier Science Publishers, Amsterdam.
113. Clary S.R., Nagarkatti, P.S. and Nagarkatti, M. Effect of nitrosoureas on thymocyte differentiation and peripheral T cell functions. **Immunopharmacology** 20:153-164, 1990.
114. Dean, T., Kakkanaiah, V.N., Nagarkatti, M. and Nagarkatti, P.S. Immunosuppression by aldicarb of T cell responses to antigen-specific and polyclonal stimuli results from defective IL-1 production by macrophages. **Toxicol. Appl. Pharmacol.** 106:408-417, 1990.
115. Dean, T. N., Selvan, R. S., Misra, H. P., Nagarkatti, M. and Nagarkatti, P. S. Aldicarb treatment inhibits the stimulatory activity of macrophages without affecting the T cell responses in syngeneic mixed lymphocyte reaction. **Int. J. Immunopharmacol.** 12:337-348, 1990.
116. Seth A., Subbarao, B., Udhayakumar, V., Nagarkatti, M. and Nagarkatti, P. S. Age-related suppression of autoreactive T cell responses and macrophage stimulatory activity in the syngeneic mixed lymphocyte reaction. **Mech. Ageing Dev.** 52:107-124, 1990.
117. Nagarkatti, M., Clary, S.R. and Nagarkatti, P. S. Characterization of tumor-infiltrating CD4⁺ T cells as Th1 cells based on lymphokine secretion and functional properties. **J. Immunol.** 144:4898-4905, 1990.
118. Kakkanaiah, V. N., Seth, A., Nagarkatti, M. and Nagarkatti, P. S. Autoreactive T cell clones isolated from normal and autoimmune-susceptible mice exhibit lymphokine secretory and functional properties of both Th1 and Th2 cells. **Clin. Immunol. Immunopathol.** 57:148-162, 1990.
119. Kakkanaiah, V. N., Nagarkatti, M., Nagarkatti, P. S. Evidence for the existence of distinct heterogeneity amongst the peripheral CD4-CD8- T cells from MRL-lpr/lpr mice based on the expression of the J11d marker. **Cell. Immunol.** 127:442-457, 1990.
120. Kakkanaiah, V. N., Pyle, R. H., Nagarkatti, M. and Nagarkatti, P. S. Evidence for major alterations in thymocyte subpopulations in murine models for autoimmune diseases. **J. Autoimmun.** 3:271-288, 1990.
121. Seth A., Subbarao, B., Udhayakumar, V., Nagarkatti, M. and Nagarkatti, P. S. Age-related suppression of autoreactive T cell responses and macrophage stimulatory activity in the syngeneic mixed lymphocyte reaction. **Mech. Ageing Dev.** 52:107-124, 1990.

122. Selvan, R. S., Nagarkatti, P. S. and Nagarkatti, M. Role of IL-2, IL-4 and IL-6 in the growth and differentiation of tumor-specific CD4⁺ T helper and CD8⁺ T cytotoxic cells. **Int. J. Cancer** 45:1096-1104, 1990.
123. Nagarkatti, M. and Nagarkatti, P. S. Calcium ionophores at doses mitogenic to normal murine T cells inhibit the proliferation of tumor cells *in vitro*. **Cancer Commun.** 1:329-334, 1989.
124. Nagarkatti, M. Toney D. and Nagarkatti, P. S. Immunomodulation by various nitrosoureas and its effect on the survival of the host bearing a syngeneic tumor. **Cancer Res.** 49:6587-6592, 1989.
125. Yurochko, A. D., Nagarkatti, P. S., Nagarkatti, M. and Elgert, K. D. Tumor-induced alteration in macrophage accessory cell activity on autoreactive T cell clone. **Cancer Immunol. Immunother.** 30:170-176, 1989.
126. Selvan, R. S., Dean, T. N., Misra, H. P., Nagarkatti, P. S. and Nagarkatti, M. Aldicarb suppresses macrophage but not natural killer (NK) cell-mediated cytotoxicity of tumor cells. **Bull. Environ. Contamin. Toxicol.** 43:676-682, 1989.
127. Nagarkatti, P., Seth, A., Nagarkatti, M., Muthuswamy, N., Rychlik, B. and Subbarao, B. A specific defect in the proliferative capacity of B cells from old mice stimulated with an autoreactive T cell clone. **Cell. Immunol.** 120:102-113, 1989.
128. Nagarkatti, M., Nagarkatti, P. S. and Kaplan, A. M. Differential effects of BCNU on T cell, macrophage, NK cell and LAK activity in mice bearing a syngeneic tumor. **Cancer Immunol. Immunother.** 27:38-46, 1988.
129. Nagarkatti, M., Seth, A. and Nagarkatti, P. S. Chemotherapy of mice bearing syngeneic tumors with BCNU is effective only in normal but not in irradiated or nude mice: III. Role of L3T4⁺ and Lyt 2⁺ T cells. **Cell. Immunol.** 115:383-392, 1988.
130. Udhayakumar, V., Subbarao, B., Seth, A., Nagarkatti, M. and Nagarkatti, P. S. Impaired autoreactive T cell-induced T cell-T cell interaction in aged mice. **Cell. Immunol.** 116:299-307, 1988.
131. Nagarkatti, P. S., Nagarkatti, M., Jones, L. A. and Kaplan, A. M. Characterization of an endogenous Lyt 2⁺ T suppressor cell population regulating autoreactive T cells *in vitro*. **Cell. Immunol.** 112:64-77, 1988.
132. Seth, A., Pyle, R. H., Nagarkatti, M. and Nagarkatti, P. S. Expression of the J11d marker on L3T4⁺Lyt2⁻ peripheral T lymphocytes of MRL-lpr/lpr mice. **J. Immunol.** 141:1120-1126, 1988.
133. Nagarkatti, P. S. and Nagarkatti, M. Immunotoxicology: a review. **Defense Sci. J.** 37:235-244, 1987.
134. Nagarkatti, P. S., Nagarkatti, M. and Kaplan, A. M. Normal Lyt 1⁺2⁻ T cells have the unique capacity to respond to syngeneic autoreactivity T cells: Demonstration of a T cell network. **J. Exp. Med.** 162:375, 1985.
135. Nagarkatti, P. S., Snow, E. C. and Kaplan, A. M. Characterization and function of autoreactive T lymphocyte clones isolated from normal, unprimed mice. **Cell. Immunol.** 94:32-48, 1985.
136. Nagarkatti, P. S., Sweeny, G. D., Gauldie, J. and Clark, D. A. Sensitivity of suppression of CTL generation by TCDD is dependent on the Ah locus of the murine host. **Toxicol. and Appl. Pharmacol.** 72:169-176, 1984.

137. Nagarkatti, P. S., Joseph, S. and Singal, D. P. Blood transfusion and antiidiotypic immunity. **Transplant. Proceed.** 16:1407-1409, 1984.
138. Nagarkatti, P. S., and Clark, D. A. *In vitro* activity and *in vivo* correlates of allo-antigen specific murine suppressor T cells induced by allogenic pregnancy. **J. Immunol.** 131:638-643, 1983.
139. Nagarkatti, P. S., and Singal, D. P. Blood-transfusion-induced suppression of cytotoxic T lymphocyte responses in mice. **Transplantation** 36:520-525, 1983.
140. Nagarkatti, P. S., and Nagarkatti, M. Effect of experimental dengue virus infection on immune response of the host. I. Nature of changes in T suppressor cell activity regulating the B and T cell responses to heterologous antigens. **J. Gen. Virology** 64:1441-1447, 1983.
141. Singal, D. P., Joseph, S. and Nagarkatti, P. S. The mechanism of enhanced renal allograft survival by blood transfusion. **Transpl. Proceed.** 15:1767-1769, 1983.
142. Nagarkatti, P. S., Joseph, S., Singal, D. P. Induction of antibodies by blood transfusions capable of inhibiting responses in MLC. **Transplantation** 36:695-699, 1983.
143. Nagarkatti, P. S. and Nagarkatti, M. Effect of experimental dengue virus infection on immune response of the host. I. Nature of changes in T suppressor cell activity regulating the B and T cell responses to heterologous antigens. **J. Gen. Virol.** 64:1441, 1983.
144. Nagarkatti, M., Nagarkatti P. S. and Raghuvveran C. D. Short term toxicity studies of O-chlorobenzylidene malononitrile (CS) on humoral immune response to bacterial lipopolysaccharide in mice. **Toxicol. Letters** 8:73-76, 1981.
145. Nagarkatti, M. and Nagarkatti, P. S. Contact sensitivity and tolerance induction to DNFB in dengue infected mice. **Immunology** 40:211-216, 1980.
146. Nagarkatti, P. S. and Nagarkatti, M. Effect of O-chlorobenzylidene malononitrile (CS) on humoral immune response to bacterial lipopolysaccharide in mice. **Bull. Environ. Contamin. Toxicol.** 26:571-575, 1981.
147. Nagarkatti, M., Nagarkatti, P. S. and Rao, K.M. Effect of dengue virus infection on humoral and cell mediated immunity to thymus dependent antigen. **Inter. Arch. Allergy Appl. Immunol.** 1-369, 1980.
148. Nagarkatti, P. S., Nagarkatti, M. and Jain, V. C. *In vivo* and *in vitro* action of chloroquine on surface markers of human peripheral lymphocytes. **Clin. Exp. Immunol.** 41:166, 1980.
149. Nagarkatti, P. S., Nagarkatti, M. and Rao, K. M. Development of a kit for the assay of HI antibodies to flaviviruses using formalinized goose erythrocytes. **Trans. Royal Soc. Trop. Med. Hyg.** 74:22, 1980.
150. Nagarkatti, P. S. and Nagarkatti, M. Comparison of HI and IFA techniques for the serological diagnosis of certain flavivirus infections. **J. Trop. Med. Hyg.** 83:115-117, 1980.
151. Nagarkatti, M. and Nagarkatti, P. S. Suppression of intrinsic B cell function in dengue infected mice. **Experientia** 35:1518, 1979.
152. D'Souza, M. B., Nagarkatti, P. S. and Rao, K. M. Subpopulation of peripheral blood lymphocytes in human encephalitis caused by Group B arboviruses. **J. Hyg. Epidemiol. Microbiol. Immunol.** 23, 59-66, 1979.
153. D'Souza, M. B., Nagarkatti, P. S. and Rao, K. M. Serological evidence for the presence of antibodies to *S. typhi* among slaughtered pigs, goats and sheep. **J. Trop. Med. Hyg.** 21:142-145, 1978.
154. D'Souza, M. B., Nagarkatti, P. S. and Rao, K. M. Serological evidence for arboviral infections among horses - HI test by filter paper disc method. **Ind. J. Med. Res.** 67:708-712, 1978.

155. Nagarkatti, P. S., D'Souza, M. B. and Rao, K. M. Use of formalinized goose erythrocytes in HA and HI tests for arboviruses. **Ind. J. Exp. Biol.** 16:399, 1978.
156. Nagarkatti, P. S., D'Souza, M. B. and Rao, K. M. Evidence for the *in vitro* production of MIF by sensitized mouse spleen cells stimulated with dengue virus. **Ind. J. Exp. Biol.** 16:10-13, 1978.
157. Nagarkatti, P. S., D'Souza, M. B. and Rao, K. M. Use of sensitized spleen cells in capillary tube migration inhibition test to demonstrate cellular sensitization to dengue virus in mouse. **J. Immunol. Methods** 23:341-348, 1978.
158. Nagarkatti, P. S., and Rao, S. S. Cell-mediated immunity to homologous spermatozoa following vasectomy in the human male. **Clin. Exp. Immunol.** 26:239-144, 1976.
159. Nagarkatti, P. S., D'Souza, M. B. and Ramachandraiah, U. Effect of trimethoprim - sulfamethoxazole on sensitivity of 221 strains of bacteria isolated from wound infections. **Indian J. Microbiol.** 12:142-148, 1976.
160. Nagarkatti, P. S. and Ramachandraiah, U. Chromoblastomycosis. **Ind. J. Derm. and Venerol.** 25:121-123, 1976.
161. Nagarkatti, P. S., D'Souza, M. B. and Ramchandraiah, U. Dermatophytosis in N-Karnataka. **Indian J. Pathology and Bacteriol.** 18:26-30, 1975.

PRESENTATIONS AT SCIENTIFIC MEETINGS/SYMPOSIA (Over 250 presentations)

Presentations at International Meetings:

1. Nagarkatti, P. Cannabinoids as a new class of anti-cancer drugs. 7th Annual Congress of International Drug Discovery, Science and Technology, Shanghai, China, 2009. (**Invited Keynote Speaker**).
2. Nagarkatti, P. Invited Plenary Lecture, at the International Conference of Natural Products and Traditional Medicine, Xian, China, 2009. (**Invited Keynote Speaker**).
3. Nagarkatti, P. International Cannabinoid Research Symposium Meeting, St. Charles, Illinois, USA, 2009 (**Invited Speaker**).
4. Nagarkatti, P. Invited to give a symposium talk at the Society of Toxicology on Complementary and Alternative Medicine, 2008.
5. Nagarkatti, P. International Drug Discovery Conference held at Beijing, China, 2008. (**Invited Keynote Speaker**).
6. Nagarkatti, P. International Society Biotechnology Conference, Sikkim, 2008 (**Invited Keynote Speaker**).
7. Nagarkatti, P. Use of cannabinoids as novel anti-inflammatory drugs through potential targeting of CB2 receptors. International Drug Discovery Science and Technology, China (**Invited Keynote Speaker**), 2008,
8. Nagarkatti, P., Hegde, V.L., Hegde, S. and Nagarkatti, M. Delta-9-tetrahydrocannabinol-induced peritoneal infiltration of neutrophils is mast-cell dependent. International Cannabinoid Research Society, Canada, 2007. (**Invited talk**)
9. Nagarkatti, M., Hegde, V.L., Hegde, S. and Nagarkatti, P.S. Delta-9-tetrahydrocannabinol treatment ameliorates T cell-mediated hepatitis by suppressing immune response in a CB1 receptor-specific mechanism. International Cannabinoid Research Society, Canada, 2007. (**Invited talk**)

10. Nagarkatti, M., Do, Y. and Nagarkatti, P. S. Bryostatin-1 promotes the maturation of murine and human dendritic cells and enhances the presentation of tumor-derived antigens to T cells through NF- κ B-dependent pathway. 12th International Congress of Immunology and the 4th Conference of FOCIS, Montreal, 2004
11. Nagarkatti, P.S., Do, Y., and Nagarkatti, M. Activation through Cannabinoid CB1 and CB2 Receptors on Dendritic Cells Triggers Nuclear Factor- κ B-dependent Apoptosis: Novel Role for Endogenous and Exogenous Cannabinoids in Immunoregulation. 12th International Congress of Immunology and the 4th Conference of FOCIS, Montreal, 2004
12. Hassuneh, M., Nagarkatti, M. and Nagarkatti, P. Effect of IL-10 on the tumorigenicity of T cell lymphomas. International Congress of Immunology, Stockholm, July 2001 (**Selected for poster discussion**).
13. Lombard, C., McKallip, R., Zeytun, A., Hassuneh, M., Nagarkatti, M. and Nagarkatti, P. Characterization of tumor-derived Fas ligand and its ability to induce apoptosis in immune cells of the host. 3rd International Cancer Gene Therapy Meeting, Paris, France, July 2000.
14. Nagarkatti, P. S., 4th International Conference of the Asian Clinical Oncology Society, Bali, Indonesia. 1999. **Invited talk**.
15. Nagarkatti, P. S., Kamath, A. B. and Xu, H. Alterations in the expression of adhesion molecules induced by TCDD as a cause of apoptosis. 7th International Congress of European Association for Veterinary Pharmacology and Toxicology, Madrid, Spain. 1997.
16. Nagarkatti, P. S., Zeytun, A., and Hassuneh, M. Apoptosis induced by cytolytic T cells and reverse apoptosis mediated by tumor cells may play a crucial role in host-tumor interactions. 4th Internat. Conference on "The Life and Death of the Cell", Edinburgh, July 1996. (Abstract published in Biochem. Soc. Transactions).
17. Nagarkatti, P.S. and Hammond-McKibben, D. Fas and Fas-ligand interaction in cytotoxicity and its role in lymphoproliferative disease. Molecular Biology of Hematopoiesis, Genoa, Italy, June 1995. **Selected for oral presentation and special recognition**.
18. Nagarkatti, P.S. and Hammond-McKibben, D. Problems associated with immunorehabilitation with IL-2: Mechanism of IL-2 mediated toxicity. Inter. Congress on Immunorehabilitation, Sochi, Russia. July 1994. **Selected for presentation at the plenary session**.
19. Nagarkatti, P. S., McKallip, R. and Nagarkatti, M. AZT alters T cell differentiation in thymus and T cell responsiveness to gp120 of HIV in the periphery. Inter. Congress on Immunorehabilitation, Sochi, Russia. July 1994. (**Invited talk**)
20. Nagarkatti, P. S. and Hammond, D. Role of adhesion molecules expressed by tumor-infiltrating lymphocytes induced following chemotherapy in successful immunotherapy of cancer. 18th International Congress of Chemotherapy. Stockholm, Sweden, 1993.
21. Nagarkatti, M., Seth, A. and Nagarkatti, P. S. The efficacy of immunotherapy using a tumor-infiltrating cytotoxic T lymphocyte clone depends on cycling pattern of cytolytic activity and density of adhesion molecules. 8th International Congress of Immunology. Budapest, Hungary, 23 - 28 August 1992.
22. Nagarkatti, P. S., Gote, L. and Nagarkatti, M. Role of CD44 in the activation of lytic activity by NK cells and CD4-CD8- T cells. 8th International Congress of Immunology. Budapest, Hungary, 23 - 28 August 1992.

23. McKallip, R., Nagarkatti, M. and Nagarkatti, P. S. Immunomodulatory properties of AZT. 3rd International Conference on Drug Research in Immunologic and Infectious Diseases, Immunomodulating Drugs: Synthesis, Preclinical and Clinical Evaluation. Washington, D. C. June 27 - July 1, 1992.
24. Nagarkatti, P. S. Role of lymphocyte homing receptors and adhesion molecules in TCR-independent activation of T cell clones. Presented at the NATO Conference on "Targeting of Drugs: The Challenge of Peptides and Proteins" held in Greece from June 25-July 5, 1991. **(Invited talk)**.
25. Nagarkatti, P. S., Kakkanaiah, V. N. and Nagarkatti, M. CD4-CD8- thymocytes from MRL-lpr/lpr mice exhibit abnormal proportions of $\alpha\beta$ - and $\gamma\delta$ -TCR⁺ cells and demonstrate defective responsiveness when activated through the TCR. 6th International Congress of Mucosal Immunology, Tokyo, Japan, July 22-27, 1990. **(Selected for an award)**.
26. Nagarkatti, M., Clary, S. R., Seth, A. and Nagarkatti, P. S. Characterization of tumor-infiltrating CD4⁺ T cells as Th1 cells based on lymphokine secretion and functional properties. 6th International Congress of Mucosal Immunology, Tokyo, Japan, July 22-27, 1990. **(Selected for an award)**.
27. Nagarkatti, P. S., Seth, A., Kakkanaiah, V. N. and Nagarkatti, M. CD4⁺ autoreactive T cell clones having the properties of both Th1 and Th2 type of T helper cells. 7th International Congress of Immunology, West Berlin, July30-Aug.5, 1989. **(Selected for Workshop presentation)**.
28. Nagarkatti, M., Selvan, R. S. and Nagarkatti, P. S. Growth and differentiation requirements of tumor-specific CD4⁺ T helper cells and CD8⁺ cytotoxic and cloned T cell lines. 7th International Congress of Immunology, West Berlin, July30-Aug.5, 1989.
29. Nagarkatti, M. and Nagarkatti, P.S. The outcome of chemotherapy with different nitrosoureas against a syngeneic tumor depends on the mode of action of the drug on the host's anti-tumor immunity. V International Congress of Toxicology, England, July 16-21, 1989 **(Selected for Workshop presentation)**.
30. Nagarkatti, P. S., Dean, T. N., Selvan, R. S. and Nagarkatti, M. Aldicarb, a carbamate pesticide selectively suppresses macrophage but not autoreactive T cell and NK cell functions. V International Congress of Toxicology, England, July 16-21, 1989.
31. Subbarao, B., Udhayakumar, V., Natarajan, M., Cross, R., Seth, A., Nagarkatti, M. and Nagarkatti, P. S. Abnormalities of intrinsic B and T lymphocyte functions in old mice. 5th International Symposium on Infections in the Immunocompromised Host. June 5-8, 1988, The Netherlands.
32. Nagarkatti, P. S., Nagarkatti, M., Jones, L. A. and Kaplan, A. M. Nature of suppressor T cells regulating the activity of autoreactive T cells. 6th International Congress of Immunol., Toronto, Canada, July 6-11, 1986.
33. Nagarkatti, M., Nagarkatti, P. S. and Kaplan, A. M. BCNU-mediated rejection of syngeneic tumor: Role of L3T4⁺ and Lyt2⁺ T cells. 6th International Congress of Immunol., Toronto, Canada, July 6-11, 1986.
34. Jones, L. A., Nagarkatti, M., Kaplan, A. M. and Nagarkatti, P. S. Nature and characteristics of an autoreactive Anti-autoreactive T-cell network. 6th International Congress of Immunol., Toronto, Canada, July 6-11, 1986.

Presentations at National and Regional Meetings (Abstracts in parenthesis):

1. Rouse, M., Nagarkatti, M. and Nagarkatti, P. AhR activation by indoles leads to amelioration of experimental autoimmune encephalomyelitis through reciprocal regulation of FoxP3+ T regs and Th17 cells. Annual Meeting of the Society of Toxicology, Salt Lake City, UT. 2010. **(Selected for platform presentation)**
2. Rieder, S.A., Nagarkatti, P. and Nagarkatti, M. Neutralization of lung toxicity and inflammation induced by superantigens using resveratrol. Annual Meeting of the Society of Toxicology, Salt Lake City, UT. 2010.
3. Nagarkatti, P., Singh, U., Singh, N. and Nagarkatti, M. AhR activation suppresses colitis by inhibiting inflammatory Th1 cells through induction of FoxP3+ regulatory T cells and Th17 cells. Annual Meeting of the Society of Toxicology, Salt Lake City, UT. 2010.
4. Jackson A, Hegde VL, Nagarkatti M and Nagarkatti PS. Endogenous Cannabinoids regulate immune function through the induction of myeloid-derived suppressor cells. March 7-11, 2010. 49th Annual Meeting of Society of Toxicology, Salt Lake City, UT, USA.
5. Singh N, Nagarkatti M and Nagarkatti PS. Resveratrol-mediated chemoprevention of TCDD-induced skin carcinogenesis. March 7-11, 2010 49th Annual Meeting of Society of Toxicology, Salt Lake City, UT, USA.
6. Hegde VL, Nagarkatti PS and Nagarkatti M. Cannabidiol attenuates experimental autoimmune hepatitis by inducing accumulation of myeloid-derived suppressor cells (MDSCs) in liver. March 7-11, 2010 49th Annual Meeting of Society of Toxicology, Salt Lake City, UT, USA.
7. Jackson AR, Nagarkatti M and Nagarkatti PS. Administration of cannabinoids enhances growth and metastasis of 4T1 murine breast cancer through the induction of myeloid derived suppressor cells. May 7-11, 2010. 97th AAI (American Association of Immunologist), Annual Meeting, Baltimore, MD, USA.
8. Zhou J, Nagarkatti PS, Zhong Y and Nagarkatti M. Anti-inflammatory effects of glucosamine in regulating the development of experimental autoimmune encephalomyelitis (EAE). May 7-11, 2010. 97th AAI (American Association of Immunologists), Annual Meeting, Baltimore, MD, USA **(Received travel Award)**.
9. Busbee B, Nagarkatti M and Nagarkatti PS. Mechanism of inhibition of colitis by indole-2-carbinol. May 7-11, 2010. 97th AAI (American Association of Immunologists), Baltimore, MD, USA.
10. Rouse, M Nagarkatti M and Nagarkatti PS. Interleukin-2 treatment promotes T-regulatory cells inhibit the development of experimental automimmune encephalomyelitis. May 7-11, 2010. 97th AAI (American Association of Immunologists), Annual Meeting, Baltimore, MD, USA.
11. Zaric V, Busbee B, Nagarkatti PS and Nagarkatti M. Potential of cannabinoids to modulate the inflammatory response in colitis. May 7-11, 2010. 97th AAI (American Association of Immunologists) Annual Meeting, Baltimore, MD, USA.
12. Hegde VL, Nagarkatti PS and Nagarkatti M. Cannabidiol attenuates experimental autoimmune hepatitis by inducing accumulation of myeloid-derived suppressor cells (MDSCs) in liver. May 7-11, 2010. 97th AAI (American Association of Immunologists) Annual Meeting, Baltimore, MD, USA **(Received travel Award; selected for mini-symposium)**.

13. Singh UP, Singh NP, Singh B, Hofseth LJ, Price RL, Nagarkatti M and Nagarkatti PS. Resveratrol induces myeloid-derived suppressor cells (MDSCs) and down-regulates CXCR3⁺ T cell expression and NF-κB activity to abrogate chronic colitis in IL-10^{-/-} mice. May 7-11, 2010. 97th AAI (American Association of Immunologists), Annual Meeting, Baltimore, MD, USA. **(Received travel Award; selected for mini-symposium)**
14. Nagarkatti, M., Pandey, R. and Nagarkatti, P. Targeting cannabinoid receptors as a novel approach to prevent graft-versus-host disease. International Cannabinoid Research Symposium Meeting, St. Charles, Illinois, USA, 2009. **(Oral Presentation)**
2. Nagarkatti, P. and Nagarkatti, M. Cannabinoids, Liver Inflammation and Cancer. International Cannabinoid Research Symposium Meeting, St. Charles, Illinois, USA, 2009. **(Invited Oral Presentation at Cannabinoids and Liver Diseases Symposium)**
3. Guan, H., Nagarkatti, P.S. and Nagarkatti, M. Resveratrol inhibits IL-2-induced vascular leak syndrome while maintaining effective treatment of melanoma by differentially modulating the suppressive functions of myeloid-derived suppressor cells. Annual national meeting of the Society of Toxicology, Baltimore, 2009. **(Selected for Platform presentation)**
4. Singh, N.P., Nagarkatti, M., and Nagarkatti, P. Resveratrol (trans-3,5,4'-trihydroxystilbene) protects mothers and fetuses following perinatal exposure to TCDD by blocking TCDD-AhR-regulated mechanisms leading to immunotoxicity. Annual national meeting of the Society of Toxicology, Baltimore, 2009. **(Selected for Platform presentation)**
5. Nagarkatti, P, and Nagarkatti, M. Mechanisms of resveratrol-induced immunomodulation and its potential use in the treatment of inflammatory and autoimmune diseases. Annual national meeting of the Society of Toxicology, Baltimore, 2009. Symposium on Immunomodulation during CAM Therapy: Risks and Benefits. **(Invited presentation)**
6. Rieder, S., Nagarkatti, P. and Nagarkatti, M. Staphylococcal enterotoxin B induces vascular leak through direct activation of natural killer T cells. Annual national meeting of the Society of Toxicology, Baltimore, 2009.
7. Pandey, R., Nagarkatti, M. and Nagarkatti, P. Targeting cannabinoid receptors as a novel approach to prevent donor T cell-mediated inflammation during graft-versus-host disease. Annual national meeting of the Society of Toxicology, Baltimore, 2009.
8. Zhou, J., Nagarkatti, P., Zhong, Y., and Nagarkatti, M. Effect of chondroitin sulfate and its degraded disaccharide on the development of experimental autoimmune encephalomyelitis (EAE). Annual meeting of American Society of Neurochemistry, Charleston, 2009.
9. Singh, N.P., Nagarkatti, M. and Nagarkatti, P. Resveratrol (trans-3,5,4'-trihydroxystilbene) in combination with retinoic acid effectively suppresses Experimental Allergic Encephalomyelitis (EAE) in mice by promoting reciprocal differentiation of regulatory T cells and Th17 cells. Annual meeting of American Society of Neurochemistry, Charleston, 2009. **(Selected for Oral Presentation)**
10. Guan, H., Nagarkatti, P.S. and Nagarkatti, M. Targeted deletion of CD44 renders protection from autoimmune encephalomyelitis correlated with characteristic T cell phenotype. Annual meeting of American Society of Neurochemistry, Charleston, 2009.
11. Zhou, J., Nagarkatti, P., Zhong, Y., and Nagarkatti, M. Immune modulation by chondroitin sulfate and its degraded disaccharide in the development of experimental autoimmune encephalomyelitis (EAE). Annual Meeting of American Association of Immunologists, 2009 **(Selected for travel award)**

12. Singh, N.P., Nagarkatti, M. and Nagarkatti, P. Resveratrol (trans-3,5,4'-trihydroxystilbene) in combination with retinoic acid effectively suppresses Experimental Allergic Encephalomyelitis (EAE) in mice by promoting reciprocal differentiation of regulatory T cells and Th17 cells. Americas Committee for Treatment and Research in Multiple Sclerosis, Atlanta, 2009.
13. Jin, Y., Hofseth, A.B., Cui, X., Windust, A., Metasic, L.E., Singh, N.P., Nagarkatti, M., Nagarkatti, P.S., Hofseth, L.J.. A role for p53 in the alleviation of colitis by American ginseng Presentation. American Association for Cancer Research, 2009.
14. Guan, H., Nagarkatti, P.S., and Nagarkatti, M. Deletion of CD44 induces a protective immune phenotype and suppresses experimental autoimmune encephalomyelitis. Americas Committee for Treatment and Research in Multiple Sclerosis, Atlanta, 2009. **(Selected for Oral Presentation)**
15. Zhou, J., Nagarkatti, P., Zhong, Y. and Nagarkatti, M. Association between CD44 polymorphism and breast cancer. Annual Meeting of the American Association of Immunologists, April 2008. **(Selected for travel award)**
16. Singh, N.P., Nagarkatti, M. and Nagarkatti, PS. c-FLIP plays important role in TCDD (2,3,7,8-tetrachlorodibenzo-p-dioxin)-induced apoptosis in primary T cells and established T cell line *in vitro*. 47th Annual Meeting of the Society of Toxicology, March 16-20, 2008, Seattle, Washington. **(Selected for platform presentation)**
17. Hegde, V., Nagarkatti, M. and Nagarkatti, PS. Attenuation of experimental autoimmune hepatitis by exogenous and endogenous cannabinoids: Involvement of regulatory T cells. 47th Annual Meeting of the Society of Toxicology, March 16-20, 2008, Seattle, Washington. **(Selected for platform presentation)**
18. Rieder, S., McKallip, R., Nagarkatti, P. and Nagarkatti, M. Staphylococcal enterotoxin B can activate NKT cells independent of CD1d. Annual Meeting of the American Association of Immunologists, April 2008.
19. Guan, H., Hegde, S., Nagarkatti, P. S. and Nagarkatti, M. Regulation of CD4 T cell differentiation by CD44. Annual Meeting of the American Association of Immunologists, April 2008.
20. Pandey, R., Hegde, V., Nagarkatti, M. and Nagarkatti, P. Delta-9-tetrahydrocannabinol-triggers mast cell degranulation through activation of cannabinoid receptors. Annual Meeting of the American Association of Immunologists, April 2008.
21. Nagarkatti, P. Invited to give a symposium talk at the Society of Toxicology on Complementary and Alternative Medicine, 2008 **(Invited talk)**.
22. Hegde, V.L., Hegde, S., Nagarkatti, M. and Nagarkatti, P. Delta-9-tetrahydrocannabinol-induced peritoneal infiltration of neutrophils is mast-cell dependent. Society of Toxicology Annual Meeting, Charlotte, March 2007. **(Selected for platform presentation; Best paper award from Immunotoxicology Specialty Section)**.
23. McKallip, R., Lombard, Catherine, Warren, James, Ramakrishnan, Rupal, Nagarkatti, Prakash S. and Nagarkatti, M. Plumbagin-induced apoptosis in lymphocytes is mediated through increased reactive oxygen species production and activation of the caspase cascade. Society of Toxicology Annual Meeting, Charlotte, March 2007. **(Selected for platform presentation)**
24. Singh, NP. Nagarkatti, M. and Nagarkatti, P.S. Resveratrol (trans-3,5,4'-trihydroxystilbene) protects T cells from 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)-induced apoptosis *in vitro*

- and reduces TCDD-induced thymic apoptosis *in vivo*. Society of Toxicology Annual Meeting, Charlotte, March 2007. **(Selected for platform presentation)**
25. Hegde, V.L., Hegde, S., Nagarkatti, M. and Nagarkatti, P. Delta-9-tetrahydrocannabinol-induced peritoneal infiltration of neutrophils is mast-cell dependent. Society of Neuroimmunopharmacology Annual Meeting, Salt Lake City, 2007. **(Selected for travel award)**
 26. Zhou, J., Nagarkatti, P.S., Robbins, P., Rosenberg, S.A. and Nagarkatti, M. Memory T cells in the tumor-infiltrating lymphocytes for adoptive cell transfer. Annual Meeting of the American Association of Immunologists, Miami, 2007.
 27. Guan, H., Nagarkatti, P.S. and Nagarkatti, M. Blockade of hyaluronan, a CD44 ligand, inhibits IL-2-induced vascular leak syndrome while maintaining effective treatment of melanoma. Annual Meeting of the American Association of Immunologists, Miami, 2007. **(Selected for platform presentation)**
 28. McKallip, R.J., Jia, W., Schlomer, J., Nagarkatti, P.S., Nagarkatti, M. Cannabidiol-induced apoptosis in human leukemia cells: A novel role of cannabidiol in the regulation of p22 *phox* and Nox4 expression. American Association for Cancer Research Meeting, Washington, DC, 2006. **(Selected for travel award)**.
 29. Ramakrishnan, R., Singh, N., Nagarkatti, P. S. and Nagarkatti, M. Bryostatin-1 acts as a TLR-4 ligand in maturation of dendritic cells. Presented at the Annual Conference of the American Association of Immunologists, Boston, MA. 2006. **Selected for oral presentation.**
 30. Hegde, V., Nagarkatti, P. and Nagarkatti, M. Role of CD44 in dendritic cell–T cell immunological synapse. Presented at the Annual Conference of the American Association of Immunologists, Boston, MA. 2006. **Selected for oral presentation.**
 31. Lombard, C., Nagarkatti, M. and Nagarkatti, P.S. Perinatal exposure to delta 9-tetrahydrocannabinol (THC) induces apoptosis in the fetal thymus. Presented at the Annual Meeting of the Society of Toxicology, San Diego. 2006. **Selected for oral presentation.**
 32. Singh, N. P, Nagarkatti, M. and Nagarkatti, P.S. 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) requires the help of dendritic cells or mitogen to induce apoptosis in primary T cells and established T cell line In Vitro. Presented at the Annual Meeting of the Society of Toxicology, San Diego. 2006. **Selected for oral presentation**
 33. Mann, B., Ramakrishnan, R., Nagarkatti, P., Nagarkatti, M., and Sriharan, S. Cannabidiol mediates immunosuppression by inducing apoptosis in splenocytes. Intercultural Conference on Cancer Research, Washington, D.C. 2006
 34. Mann, B., Ramakrishnan, R., Nagarkatti, P., Nagarkatti, M., and Sriharan, S. Cannabidiol mediates immunosuppression by inducing apoptosis in splenocytes. Annual Meeting of the American Society of Plant Biologists which will be held in Boston Massachusetts August 5-9, 2006. **Selected for Travel Award.**
 35. Melencio, L., Nagarkatti, P.S. and Nagarkatti, M. Role of CD4+CD25+ T cells in regulating vascular injury mediated by NK and NKT cells following high dose IL-2 treatment. Annual Meeting of American Association of Immunologists, 2005. **(Selected for platform presentation)**
 36. Jia, W., Hegde, V., Nagarkatti, M. and Nagarkatti, P.S. Ligand of cannabinoid receptors on Jurkat cells induces apoptosis by translocation of Bad to mitochondria through disruption of Raf-1/Mek/Erk/Rsk pathway. Annual Meeting of American Association of Immunologists, 2005.

37. Mann, B., Ramakrishnan, R., Nagarkatti, P., Nagarkatti, M. and Sriharan, S. Role of vanilloid receptors in cannabidiol-induced apoptosis in immune cells. Annual Biomedical Research Conference for Minority Students, Atlanta. Nov. 2005
38. Lombard, C., Nagarkatti, M. and Nagarkatti, P.S. CB2 receptor agonist, JWH015 triggers apoptosis in immune cells: Potential role for CB2 selective ligands as immunosuppressive agents. 44th Annual Meeting of the Society of Toxicology, New Orleans, 2005. **(Selected for platform presentation; Award from the In Vitro Specialty Section)**
39. Camacho, I. A., Nagarkatti, M. and Nagarkatti, P. S. Enhanced apoptosis in the fetal thymus following perinatal exposure to 2, 3, 7, 8-tetrachlorodibenzo-*p*-dioxin (TCDD). Annual Meeting of Society of Toxicology, Baltimore, 2004 **(Selected for platform presentation)**
40. Faulconer, F., Camacho, I., Nagarkatti, M. and Nagarkatti, P.S. Use of carboxyfluorescein succinimidyl ester (CFSE) to detect number of T cell divisions induced by a superantigen following exposure to 2,3,7,8 – tetrachlorodibenzo-*p*-dioxin (TCDD). Annual Meeting of Society of Toxicology, Baltimore, 2004
41. McKallip, R.J., Nagarkatti, M. and Nagarkatti, P.S. The effects of cannabinoid exposure on tumor growth and the anti-tumor immune response. Annual Meeting of Society of Toxicology, Baltimore, 2004 **(Selected for platform presentation)**
42. Fisher, M.T., Nagarkatti, M., Nagarkatti, P.S. Effect of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) on positive and negative selection of T cells in the thymus. Annual Meeting of Society of Toxicology, Baltimore, 2004 **(Selected for platform presentation)**
43. Do, Y., Nagarkatti, M., Nagarkatti, P. Bryostatin-1 promotes the maturation of murine and human dendritic cells and enhances the presentation of tumor-derived antigens to T cells through NF- κ B-dependent pathway. Annual Meeting of American Association of Immunologists (FASEB), Washington, DC. 2004. **(Selected for oral presentation)**.
44. McKallip, R. J., Nagarkatti, P.S. and Nagarkatti, M. The role of CD44 in SEB-induced toxic shock: CD44 deficiency leads to reduced lymphocyte apoptosis resulting in increased liver damage. Annual Meeting of American Association of Immunologists (FASEB), Washington, DC. 2004. **(Selected for oral presentation)**
45. M. Nagarkatti, M., Do, Y. and Nagarkatti, P. Bryostatin promotes maturation and tumor antigen presenting ability of murine and human DC through NF κ B dependent pathway. 6th Joint Conference of American Association for Cancer Research and Japanese Cancer Association, Hawaii, Jan 2004
46. Nagarkatti, P. S., Lombard, C., McKallip, R.J. and Nagarkatti, M. Use of cannabinoids as novel anti-cancer agents against and their mode of action against malignancies of the immune system. 6th Joint Conference of American Association for Cancer Research and Japanese Cancer Association, Hawaii, Jan 2004
47. Brown, N., Nagarkatti, M. and Nagarkatti, P. Molecular mechanisms of apoptosis induction by diethylstilbestrol in a T cell leukemia cell line. At the “Preparing a Diverse Scientific Workforce: Eliminating Health Disparities” Annual Biomedical Research Conference for Minority Students, National Institute of General Medical Sciences, San Diego, Oct. 1-18, 2003. **(Selected for Award from Endocrinology Society)**
48. McKallip, R.J., Fisher, M., Szakal, A.K., Gunthert, U., Nagarkatti, P.S. and Nagarkatti, M. The role of CD44v7 exon in IL-2 induced endothelial cell injury and vascular leak syndrome. Annual Meeting of Association of Immunologists, Denver, 2003. **(Selected for oral presentation)**

49. Do, Y., Nagarkatti, P. S. and Nagarkatti, M. Byostatin-1 promotes the maturation of murine and human dendritic cells and enhances their ability to present antigen to naïve and sensitized T cells. Annual Meeting of Association of Immunologists, Denver, 2003.
50. Lombard, C. A., Nagarkatti, M. and Nagarkatti, P. S. Mechanism of cannabinoid-induced apoptosis in cells of immune origin. Annual Meeting of Society of Toxicology, Salt Lake City, 2003. **(Selected for platform presentation)**
51. Fisher, M., Nagarkatti, P.S. and Nagarkatti, M. TCDD-induced loss of mitochondrial membrane potential in spermatozoa is independent of Fas and FasL. Annual Meeting of Society of Toxicology, Salt Lake City, 2003. **(Selected for platform presentation)**
52. Camacho, I.A., Nagarkatti, M. and Nagarkatti, P.S. Effect of 2,2,7,8-tetrachlorodibenzo-p-dioxin (TCDD) on the immunological status of C57BL/6 pregnant mice. Annual Meeting of Society of Toxicology, Salt Lake City, 2003. **(Selected for platform presentation; 1st Place Award at the Immunotoxicology Specialty Section, 3rd Place Award at Developmental Specialty Section)**
53. McKallip, R.J., Fisher, M., Szakal, A.K., Gunthert, U., Nagarkatti, P.S. and Nagarkatti, M. Targeted deletion of CD44v7 exon leads to decreased IL-2 induced endothelial cell toxicity and vascular leak syndrome. Annual Meeting of Society of Toxicology, Salt Lake City, 2003.
54. Brown, N., Nagarkatti, P., Nagarkatti, M. Cross-talk between death receptor-mediated and mitochondrial pathways of apoptosis induced by DES in Jurkat cells. Annual Meeting of Society of Toxicology, Salt Lake City, 2003. **(Honorable Mention at the Mechanisms Specialty Section)**
55. Do, Y., Nagarkatti, M. and Nagarkatti, P.S. DES mediates apoptosis in hematopoietic stem cells and developing thymocytes leading to immune dysfunction. Annual Meeting of Society of Toxicology, Salt Lake City, 2003. **(Travel Award of the Regulatory and Safety Evaluation Specialty Section)**
56. McKallip, R.J., Fisher, M., Szakal, A., Gunthert, U., Nagarkatti, P.S. and Nagarkatti, M. The role of CD44v7 in endothelial cell injury and vascular leak syndrome associated with IL-2 treatment of malignant melanoma and renal cell carcinoma. 23rd Annual Meeting of American Cancer Society, Virginia Division, Charlottesville, 2003.
57. Fisher, M.T., Nagarkatti, M. and Nagarkatti, P.S. Combined screening of thymocytes using apoptosis specific cDNA array and promoter analysis yields novel gene targets mediating tcdd-induced toxicity. 23rd Annual Meeting of American Cancer Society, Virginia Division, Charlottesville, 2003.
58. Lombard, C., McKallip, R.J., Nagarkatti, M. and Nagarkatti, P.S. Ligation of cannabinoid receptors leads to induction of apoptosis in transformed immune cells. 23rd Annual Meeting of American Cancer Society, Virginia Division, Charlottesville, 2003.
59. Do, Y., Nagarkatti, M. and Nagarkatti, P.S. Ligation of cannabinoid CB1 and CB2 receptors on dendritic cells triggers apoptosis : A novel role for endogenous and exogenous cannabinoids in immunoregulation. 23rd Annual Meeting of American Cancer Society, Virginia Division, Charlottesville, 2003.
60. Brown, N., Nagarkatti, P. and Nagarkatti, M. Cross-talk between death receptor-mediated and mitochondrial pathways of apoptosis induced by DES in Jurkat cells. 23rd Annual Meeting of American Cancer Society, Virginia Division, Charlottesville, 2003.

61. Do, Y., Nagarkatti, P. S. and Nagarkatti, M. Byostatin-1 promotes the maturation of murine and human dendritic cells and enhances their ability to present antigen to naïve and sensitized T cells. Massey Cancer Center, VCU Research Retreat, June 2003.
62. Brown, N., Nagarkatti, P., Nagarkatti, M. Cross-talk between death receptor-mediated and mitochondrial pathways of apoptosis induced by DES in Jurkat cells. Massey Cancer Center, VCU Research Retreat, June 2003.
63. Fisher, M.T., McKallip, R.J., Szakal, A.K., Gunthert, U., Nagarkatti, P. S. and Nagarkatti, M. The role of CD44v7 in IL-2 induced endothelial cell injury and vascular leak syndrome. Massey Cancer Center, VCU Research Retreat, June 2003.
64. Fisher, M., Zeytun, A., McKallip, R., Nagarkatti, M. and Nagarkatti, P. TCDD-induced gene expression profile suggests the involvement of death-receptor pathway leading to induction of apoptosis in the thymus and other organs. Bioinformatics and Pharmacogenomics Symposium, Richmond, 2002.
65. McKallip, R.J., Fisher, M., Szakal, A.K., Gunthert, U., Nagarkatti, P.S. and Nagarkatti, M. Targeted deletion of CD44v7 exon leads to decreased endothelial cell injury and vascular leak syndrome induced by IL-2 activated cytolytic lymphocytes. Massey Cancer Center, VCU Research Retreat, 2002.
66. Zeytun, A., McKallip, R., Fisher, M., Nagarkatti, M. and Nagarkatti, P. TCDD-induced gene expression profile suggests the involvement of death receptor pathway leading to induction of apoptosis in the thymus. Massey Cancer Center, VCU Research Retreat, 2002.
67. Camacho, I. A., Nagarkatti, M. and Nagarkatti, P. S. Role of Ah receptor in TCDD-induced apoptosis in the thymus. Massey Cancer Center, VCU Research Retreat, 2002.
68. Brown, N., Nagarkatti, P. and Nagarkatti, M. Diethylstilbestrol induces apoptosis in lymphomas and leukemias: Role of death receptor versus mitochondrial pathways. Massey Cancer Center, VCU Research Retreat, 2002.
69. Lombard, C., McKallip, R. J., Fisher, M., Martin, B. R., Ryu, S., Grant, S., Nagarkatti, P. S. and Nagarkatti, M. Targeting CB2 cannabinoid receptors as a novel therapy to treat malignant lymphoblastic disease. Massey Cancer Center, VCU Research Retreat, 2002.
70. Do, Y., Nagarkatti, P. S. and Nagarkatti, M. Mice double-deficient in CD44 and Fas exhibit an early and severe form of lymphoproliferative disease due to increased resistance to activation-induced cell death. Massey Cancer Center, VCU Research Retreat, 2002.
71. Do, Y., Ryu, S., Nagarkatti, M. and Nagarkatti, P. S. Role of Fas-FasL interactions in estradiol-induced thymic atrophy and apoptosis. **Selected for Platform Session on “Apoptosis”** at 41st Annual Meeting of the Society of Toxicology, Nashville, 2002. **Selected for Award in the Mechanisms Specialty Section.**
72. Brown, N.C., Nagarkatti, M. and Nagarkatti, P. S. Diethylstilbestrol induced apoptosis in lymphomas and leukemias: Role of Fas ligand upregulation. **Selected for Platform Session on “Apoptosis”** at 41st Annual Meeting of the Society of Toxicology, Nashville, 2002. **First Place Award in the In Vitro Specialty Section.**
73. Lombard, C.A., McKallip, R. J., Nagarkatti, M. and Nagarkatti, P. S. Ligation of cannabinoid receptors leads to induction of apoptosis in transformed immune cells. **Selected for Platform Session on “Apoptosis”** at 41st Annual Meeting of the Society of Toxicology, Nashville, 2002. **First Place Award in the Regulatory and Safety Evaluation Specialty Section.**
74. McKallip, R. J., Lombard, C.A., Martin, B.R., Nagarkatti, M. and Nagarkatti, P. S. Evidence for the induction of apoptosis in immune cells by delta-9-tetrahydrocannabinol. **Selected for**

- Platform Session on “Immunotoxicology”** at 41st Annual Meeting of the Society of Toxicology, Nashville, 2002.
75. Zeytun, A., McKallip, R. J., Fisher, M., Nagarkatti, M. and Nagarkatti, P. S. TCDD-induced gene expression profile suggests the involvement of death-receptor pathway leading to induction of apoptosis in the thymus. **Selected for Platform Session on “Biological Effects of TCDD exposure in vivo”** at 41st Annual Meeting of the Society of Toxicology, Nashville, 2002.
 76. Camacho, I.A., Nagarkatti, M. and Nagarkatti, P. S. Role of Ah receptor in TCDD-induced apoptosis in the thymus. **Selected for Platform Session on “Biological Effects of TCDD exposure in vivo”** at 41st Annual Meeting of the Society of Toxicology, Nashville, 2002.
 77. Nagarkatti, P. S., Camacho, I.A., Sproull, M., Hassuneh, M. and Nagarkatti, M. Upregulation of FasL gene expression and enhanced activation-induced cell death as a mechanism of TCDD-induced immunotoxicity. **Invited Presentation** at the Symposium on “Unravelling a mystery: Mechanism(s) responsible for TCDD-induced immunotoxicology” at the 40th Annual Meeting of Society of Toxicology, San Francisco, 2001.
 78. Zeytun, A., Camacho, I., Nagarkatti, M. and Nagarkatti, P. Analysis of TCDD-induced apoptosis and cytokine gene expression in thymus using microarray technology. (**Selected for Platform Session** on TCDD I at the 40th Annual Meeting of Society of Toxicology, San Francisco, 2001).
 79. Camacho, I. A., Nagarkatti, M. and Nagarkatti, P. Enhanced activation-induced cell death as a mechanism of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)-induced immunotoxicity in superantigen-activated T cells. (**Selected for Platform Session** on TCDD I at the 40th Annual Meeting of Society of Toxicology, San Francisco, 2001).
 80. Fisher, M., Zeytun, A., McKallip, R., Nagarkatti, M. and Nagarkatti, P. TCDD-induced gene expression profile suggests the involvement of death-receptor pathway leading to induction of apoptosis in the thymus and other organs. Bioinformatics and Pharmacogenomics Symposium, Richmond, 2002.
 81. McKallip, R.J., Fisher, M., Szakal, A.K., Gunthert, U., Nagarkatti, P.S. and Nagarkatti, M. Targeted deletion of CD44v7 exon leads to decreased endothelial cell injury and vascular leak syndrome induced by IL-2 activated cytolytic lymphocytes. Massey Cancer Center, VCU Research Retreat, June 2002.
 82. Zeytun, A., McKallip, R., Fisher, M., Nagarkatti, M. and Nagarkatti, P. TCDD-induced gene expression profile suggests the involvement of death receptor pathway leading to induction of apoptosis in the thymus. Massey Cancer Center, VCU Research Retreat, June 2002.
 83. Camacho, I. A., Nagarkatti, M. and Nagarkatti, P. S. Role of Ah receptor in TCDD-induced apoptosis in the thymus. Massey Cancer Center, VCU Research Retreat, June 2002.
 84. Brown, N., Nagarkatti, P. and Nagarkatti, M. Diethylstilbesterol induces apoptosis in lymphomas and leukemias: Role of death receptor versus mitochondrial pathways. Massey Cancer Center, VCU Research Retreat, June 2002.
 85. Lombard, C., McKallip, R. J., Fisher, M., Martin, B. R., Ryu, S., Grant, S., Nagarkatti, P. S. and Nagarkatti, M. Targeting CB2 cannabinoid receptors as a novel therapy to treat malignant lymphoblastic disease. Massey Cancer Center, VCU Research Retreat, June 2002.
 86. Do, Y., Nagarkatti, P. S. and Nagarkatti, M. Mice double-deficient in CD44 and Fas exhibit an early and severe form of lymphoproliferative disease due to increased resistance to activation-induced cell death. Massey Cancer Center, VCU Research Retreat, June 2002.

87. Camacho, I.A., Nagarkatti, M. and Nagarkatti, P. Enhanced activation-induced cell death as a mechanism of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)-induced immunotoxicity in superantigen-activated T cells. (21st Annual Seminar of Cancer Researchers in Virginia, Richmond. 2001)
88. Ryu, S., Nagarkatti, M. and Nagarkatti, P. S. Evidence for estradiol-induced apoptosis and dysregulated T cell maturation in the thymus (21st Annual Seminar of Cancer Researchers in Virginia, Richmond. 2001)
89. Do, Y., Nagarkatti, P. and Nagarkatti, M. Role of CD44-hyaluronate (HA) and Fas-Fas ligand interactions in dendritic cell maturation and functions. (21st Annual Seminar of Cancer Researchers in Virginia, Richmond. 2001)
90. Lombard, C., Mc Kallip, R., Nagarkatti, P. and Nagarkatti, P. Characterization of tumor-derived Fas-ligand and its ability to induce apoptosis in immune cells of the host. (21st Annual Seminar of Cancer Researchers in Virginia, Richmond. 2001)
91. McKallip, R. J., Nagarkatti, P. S., and Nagarkatti, M. Role of CD44 in apoptosis following T cell activation (21st Annual Seminar of Cancer Researchers in Virginia, Richmond. 2001)
92. Nagarkatti, M., Kamath, A. and Nagarkatti, M. Dexamethasone induces apoptosis in all subsets of T lymphocytes in the thymus and periphery. Annual Meeting of the Society of Toxicology, Philadelphia, PA, March 2000 (**Selected for platform presentation**)
93. Hudson, L. M., Nagarkatti, M. and Nagarkatti, P. S. TCDD-induced apoptosis in the thymocytes of perinatally-exposed neonates. Annual Meeting of the Society of Toxicology, Philadelphia, PA, March 2000 (**Selected for platform presentation**)
94. Zeytun, A., Nagarkatti, M. and Nagarkatti, P. S. Role of Fas and Fas ligand in methylcholanthrene-induced tumorigenesis. Annual Meeting of the Society of Toxicology, Philadelphia, PA, March 2000 (**Selected for platform presentation**)
95. Sproull, M. T., Zeytun, A., Nagarkatti, M., Hudson, L. M., Duncan, R., Nagarkatti, P. S. Upregulation of Fas ligand in various tissues following TCDD administration. Annual Meeting of the Society of Toxicology, Philadelphia, PA, March 2000 (**Selected for poster discussion**)
96. Chen, D., Nagarkatti, P. S. and Nagarkatti, M. Role of CD44 in conA-induced hepatitis. Annual Meeting of American Association of Immunology, 2000.
97. Okasha, S. A., Nagarkatti, P. S. and Nagarkatti, M. Evidence for estradiol-induced apoptosis and dysregulated T cell maturation in the thymus. 20th Annual Seminar of the American Cancer Society, Virginia, Norfolk, VA, 2000.
98. Zeytun, A., Nagarkatti, M. and Nagarkatti, P.S. Role of Fas and Fas ligand in methylcholanthrene-induced tumorigenesis. 20th Annual Seminar of the American Cancer Society, Virginia, Norfolk, VA, 2000.
99. Camacho, I. A., Nagarkatti, M. and Nagarkatti, P. S. Role of TCDD-induced apoptosis as a mechanism of immunotoxicity in peripheral T cells activated through the T cell receptor. 20th Annual Seminar of the American Cancer Society, Virginia, Norfolk, VA, 2000.
100. Hassuneh, M., Nagarkatti, M. and Nagarkatti, P. S. Role of interleukin 10 in the tumorigenicity of lymphoma. 20th Annual Seminar of the American Cancer Society, Virginia, Norfolk, VA, 2000.
101. Lombard, C., Zeytun, A., Nagarkatti, M. and Nagarkatti, P. S. Tumor cells express both the standard for and isoform of Fas ligand capable of inducing apoptosis in host-derived T cells. 20th Annual Seminar of the American Cancer Society, Virginia, Norfolk, VA, 2000.

102. McKallip, R. J., Nagarkatti, P. S. and Nagarkatti, M. Induction of apoptosis by FasL+ tumor cells in T cells, B cells and macrophages. 20th Annual Seminar of the American Cancer Society, Virginia, Norfolk, VA, 2000.
103. Chen, D., Nagarkatti, P. and Nagarkatti, M. Role of CD44 in con A-induced hepatitis. 20th Annual Seminar of the American Cancer Society, Virginia, Norfolk, VA, 2000.
104. Nagarkatti, M., Kamath, A. B., Camacho, I., and Nagarkatti, P. S. Role of caspases and Fas ligand in the induction of apoptosis in thymocytes by TCDD. 38th Annual Meeting of the Society of Toxicology, New Orleans, 1999.
105. Camacho, I., Nagarkatti, M. and Nagarkatti, P. S. Role of TCDD-induced apoptosis as a mechanism of immunotoxicity in peripheral T cells activated through the T cell receptor. 38th Annual Meeting of the Society of Toxicology, New Orleans, 1999.
106. Hudson, L.M., Nagarkatti, M., Linzey, D., Linzey, J. B., Robertson, J., Brecht, C., Burroughs, J., Bacons, J. and Nagarkatti, P. S. Pollutant-induced immunosuppression as a cause of dwindling amphibian populations. 38th Annual Meeting of the Society of Toxicology, New Orleans, 1999.
107. Zeytun, A., Nagarkatti, M., and Nagarkatti, P. S. Growth of FasL bearing tumor cells in syngeneic murine host induces apoptosis and toxicity in Fas+ organs. 19th Annual Seminar of Cancer Researchers in Virginia, University of Virginia, Charlottesville, 1999.
108. Do, Y., Nagarkatti, M. and Nagarkatti, P. S. Mice deficient in CD44 and Fas develop early lymphoproliferative disease. 19th Annual Seminar of Cancer Researchers in Virginia, University of Virginia, Charlottesville, 1999.
109. Davidson, J.G., Nagarkatti, M. and Nagarkatti, P. S. Evidence for the role of CD44 in the induction of apoptosis. 19th Annual Seminar of Cancer Researchers in Virginia, University of Virginia, Charlottesville, 1999.
110. Hudson, L.M., Nagarkatti, M., and Nagarkatti, P. S. Role of Apoptosis in 2,3,7,8-Tetrachlorodibenzo-*p*-dioxin (TCDD)-induced immunotoxicity following perinatal exposure. . 77th Annual Meeting of Virginia Academy of Sciences, Old Dominion University, 1999.
111. Davidson, J. G. , Nagarkatti, M. and Nagarkatti, P. S.. CD44 deficient thymocytes show resistance to apoptosis when cultured *in vitro*. 77th Annual Meeting of Virginia Academy of Sciences, Old Dominion University, 1999.
112. Do, K. Y. , Nagarkatti, M. and Nagarkatti, P. S.. Role of CD44 and Fas in the development of autoimmune disease. 77th Annual Meeting of Virginia Academy of Sciences, Old Dominion University, 1999.
113. Kamath, A. B., Camacho, I., Nagarkatti, P. S. and Nagarkatti, M. Fas-Fas ligand interactions may regulate 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) induced apoptosis in thymocytes. 14th Annual Virginia Tech Research Symposium, 1998. **(Won 2nd place in Life Sciences category).**
114. Kamath, A. B., Nagarkatti, P. S. and Nagarkatti, M. 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) induced apoptosis in thymocytes may be regulated by Fas-Fas ligand interactions. 37th Annual Meeting of the Society of Toxicology, Seattle, 1998.
115. Nagarkatti, M., Nagarkatti, P. S. and Kamath, A. B. Characterization of phenotypic alterations induced by TCDD in thymocytes of C57BL/6+/, *lpr/lpr* and *gld/gld* mice and its effect on apoptosis. 37th Annual Meeting of the Society of Toxicology, Seattle, 1998. **(Selected for platform presentation).**
116. Zeytun, A., Nagarkatti, M. and Nagarkatti, P. S. Immunotoxicity induced by tumor secreted Fas ligand. 18th Annual Seminar of Cancer Researchers in Virginia, Blacksburg, 1998.

117. Camacho, I. A., Kamath, A.B., Nagarkatti, M. and Nagarkatti, P. S. Fas-Fas ligand interactions may regulate 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) induced apoptosis in thymocytes. 18th Annual Seminar of Cancer Researchers in Virginia, Blacksburg, 1998.
118. Kamath, A. B., Nagarkatti, P. S., and Nagarkatti, M. Phenotypic alterations induced by TCDD in thymocytes of C57BL/6+/, lpr/lpr and gld/gld mice and its effects on apoptosis. 18th Annual Seminar of Cancer Researchers in Virginia, Blacksburg, 1998.
119. Rafi A., Zeytun, A., Bradley, M. J., Sponenberg, D. P., Grayson, R. L., Nagarkatti, M. and Nagarkatti, P. S. Evidence for the involvement of Fas ligand and perforin in the induction of vascular leak syndrome. 18th Annual Seminar of Cancer Researchers in Virginia, Blacksburg, 1998.
120. Kamath, A. B., Xu, H., Nagarkatti, P. S. and Nagarkatti, M. Altered expression of T cell receptor and other adhesion molecules correlates with the induction of apoptosis in thymocytes of mice exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). Society of Toxicology National Meeting, Cincinnati, 1997. **(Selected for SOT Mechanism award).**
121. Zeytun, A., Hassuneh, M., Nagarkatti, M. and Nagarkatti, P. S. Fas-Fas ligand based interactions between tumor cells and tumor-specific CTL: A lethal two-way street. Annual Meeting of American Association of Immunologists, 1997.
122. Kamath, A. B., Xu, H., Nagarkatti, P. S. and Nagarkatti, M. Correlation of the altered expression of t cell receptor and other adhesion molecules with the induction of apoptosis in thymocytes of mice exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). 9th Annual Research Symposium, VA-MD Regional College of Veterinary Medicine, 1997.
123. Pryputniewicz, S.J., Nagarkatti, M. and Nagarkatti, P. S. Dioxin differentially affects activated and naive T cells within the same animal. 17th Annual Seminar of Cancer Researchers in Virginia, Richmond, 1997.
124. Rafi, A., Nagarkatti, M. and Nagarkatti, P. S. Role of perforin and Fas ligand (FasL) in the development of vascular leak syndrome (VLS) following treatment with interleukin-2 (IL-2). 17th Annual Seminar of Cancer Researchers in Virginia, Richmond, 1997.
125. Kamath, A., Nagarkatti, P. S. and Nagarkatti, M. Evidence for the induction of apoptosis in thymocytes by 2,3,7,8-tetrachlorodibenzo-p-dioxin *in vivo*. 17th Annual Seminar of Cancer Researchers in Virginia, Richmond, 1997.
126. Zeytun, A., Nagarkatti, M. and Nagarkatti, P. S. Fas-FasL based interactions between tumor cells and tumor-specific CTL: A lethal two-way street. 17th Annual Seminar of Cancer Researchers in Virginia, Richmond, 1997.
127. Pryputniewicz, S. J., Nagarkatti, M. and Nagarkatti, P.S. Dioxin differentially affects activated and naive cells within the same animal. 13th Annual Graduate Research Symposium, Virginia Tech, 1997.
128. Kamath, A. B., Xu, H., Nagarkatti, P. S. and Nagarkatti, M. Altered expression of T cell receptor and other adhesion molecules correlates with the induction of apoptosis in thymocytes of mice exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). 13th Annual Graduate Research Symposium, Virginia Tech, 1997.
129. Rafi, A., Zeytun, A., Nagarkatti, M. and Nagarkatti, P. Significance of age-dependent appearance of cytotoxic double negative T cells and their ability to constitutively produce cytokines in the regulation of immune response in mice exhibiting defects in Fas and Fas ligand (FasL) expression. 13th Annual Graduate Research Symposium, Virginia Tech, 1997.
130. Rafi, A., Nagarkatti, P. and Nagarkatti, M. CD44-hyaluronic acid interactions can induce murine B cell activation. 75th Annual Meeting of Virginia Academy of Sciences,

Blacksburg, VA, 1997. **(Won 3rd place for best paper presented in graduate student competition in Medical Sciences)**

131. Kamath, A. B., Xu, H., Nagarkatti, P. S. and Nagarkatti, M. Induction of apoptosis in thymocytes of mice exposed to 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) correlates with altered expression of T cell receptor and other adhesion molecules. 75th Annual Meeting of Virginia Academy of Sciences, Blacksburg, VA, 1997.
132. Kamath, A., Nagarkatti, P. S. and Nagarkatti, M. Evidence for the induction of apoptosis by 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) *in vivo*. Presented in the platform session on TCDD I: Toxicology at the 35th Annual Meeting of the Society of Toxicology, Anaheim, CA, March 1996.
133. Nagarkatti, M., Rhile, M. J., Kamath, A. and Nagarkatti, P. S. Role of Fas apoptosis and MHC genes in 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)-induced immunotoxicity of T cells. Presented in the platform session on TCDD II: Molecular Biology at the 35th Annual Meeting of the Society of Toxicology, Anaheim, CA, March 1996.
134. Bradley, M.J., Nagarkatti, P., and Nagarkatti, M. Fas ligand is not critical for spontaneous and IL-2 induced lytic activity by NK cells: Evidence from Fas-ligand mutant *gld* mice. Presented at the 87th annual meeting of the American Association for Cancer Research, Washington, D.C. April, 1996.
135. Zeytun, A., Nagarkatti, M., and Nagarkatti, P.S. Interaction between Fas and FasL plays an important role in the tumor specific cytotoxicity mediated by cytolytic T cells. Presented at the 87th annual meeting of the American Association for Cancer Research, Washington, D.C. April, 1996.
136. Fiadiero, M., Rhile, M., Kamath, A., Nagarkatti, P. S. and Nagarkatti, M. Immunotoxicity induced by 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) is regulated by Fas and MHC genes. 16th Annual Seminar of Cancer Researchers in Virginia, Norfolk, March 1996.
137. Rafi, A., Hammond, D., Nagarkatti, M and Nagarkatti, P. S. Interaction between Fas ligand (FasL) and Fas is critical in the MHC-unrestricted cytotoxicity of tumor cells exhibited by $\alpha\beta$ TCR+ CD4-CD8- T cells. 16th Annual Seminar of Cancer Researchers in Virginia, Norfolk, March 1996.
138. Bradley, M. J., Nagarkatti, P. and Nagarkatti, M. Perforin but not FasL plays a critical role in the spontaneous and IL-2 induced lytic activity by NK cells: Evidence from FasL mutant and perforin knockout mice. 16th Annual Seminar of Cancer Researchers in Virginia, Norfolk, March 1996.
139. Zeytun, A., Nagarkatti, M. and Nagarkatti, P. S. The role of perforin and Fas ligand in the induction of anti-tumor immunity against a T cell lymphoma. 16th Annual Seminar of Cancer Researchers in Virginia, Norfolk, March 1996.
140. Kamath, A., Xu, H., Nagarkatti, P. S. and Nagarkatti, M. 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) triggers apoptosis in thymocytes leading to thymic atrophy *in vivo*. 16th Annual Seminar of Cancer Researchers in Virginia, Norfolk, March 1996.
141. Nagarkatti, M., Rhile, M. J., Kamath, A. and Nagarkatti, P. S. Role of Fas apoptosis and MHC genes in 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) induced immunotoxicity of T cells. 8th Annual Research Symposium, VA-MD Regional College of Veterinary Medicine, Blacksburg, June 1996.
142. Kamath, A., Xu, H., Nagarkatti, P. S. and Nagarkatti, M. 2,3,7,8 - tetrachlorodibenzo-p-dioxin (TCDD) induces thymic atrophy *in vivo* due to programmed cell death (apoptosis) of

- the thymocytes. 8th Annual Research Symposium, VA-MD Regional College of Veterinary Medicine, Blacksburg, June 1996.
143. Kao, H., Hammond-McKibben, Seth, A., Nagarkatti, P. S. and Nagarkatti, M. Factors regulating successful immunotherapy using a tumor-specific cytotoxic T cell clone. FASEB Meeting of the American Association of Immunologists, April 1995, Atlanta. **(Selected for Minisymposium Presentation)**. (Abstract :FASEB J. 9: 1023a).
 144. Rafi, A., Nagarkatti, M. and Nagarkatti, P. S. CD44-hyaluronic acid interactions in B lymphocyte cell activation. FASEB Meeting of the American Association of Immunologists, April 1995, Atlanta. (Selected for Minisymposium Presentation). (Abstract: FASEB J. 9:771a).
 145. Hassuneh, M., Nagarkatti, P. S. and Nagarkatti, M. Dysregulation of cytokine gene expression as a cause of T cell transformation and *in vivo* tumorigenicity. FASEB Meeting of the American Association of Immunologists, April 1995, Atlanta. (Abstract: FASEB J. 9:3101a).
 146. Bradley, M., Gote, L., Nagarkatti, P. S. and Nagarkatti, M. Role of CD44 and CD95 (Fas) in the regulation of natural killer cell mediated cytotoxicity. FASEB Meeting of the American Association of Immunologists, April 1995, Atlanta. **(Selected for Minisymposium Presentation)**. (Abstract: FASEB J. 9: 1022a).
 147. Hammond-McKibben, Nagarkatti, M. and Nagarkatti, P. S. Lysis of endothelial cells by abnormal double-negative T cells found in autoimmune MRL-lpr/lpr mice. FASEB Meeting of the American Association of Immunologists, 1995, Atlanta. (Abstract: FASEB J. 9: 525a).
 148. Nagarkatti, P. S., Hammond-McKibben, D. and Nagarkatti, M. Interaction between Fas and its ligand is essential for double-negative T cell-mediated cytotoxicity. FASEB Meeting of the American Association of Immunologists, April 1995, Atlanta. (Abstract: FASEB J. 9: 787a).
 149. Hassuneh, M., Nagarkatti, P. S. and Nagarkatti, M. An autocrine growth factor dependent T cell lymphoma produces immunosuppressive molecules for *in vivo* growth. 15th Annual Meeting of Cancer Researchers of Virginia, American Cancer Society, Charlottesville, April 1995.
 150. Bradley M.J., Gote, L., Nagarkatti, P. S. and Nagarkatti, M. Natural killer cell mediated cytotoxicity regulation through CD44 and CD95 (Fas). 15th Annual Meeting of Cancer Researchers of Virginia, American Cancer Society, Charlottesville, April 1995.
 151. Hammond-McKibben, D. and Nagarkatti, P. S. Role of cytotoxic T cells in the induction of vascular leak syndrome (VLS) during cancer immunotherapy. 72nd Annual Meeting of Virginia Academy of Sciences, James Madison University, Harrisonburg, VA 1994.
 152. Rafi, A. and Nagarkatti, P. S. CD44-hyaluronic acid interactions in lymphocyte activation. 72nd Annual Meeting of Virginia Academy of Sciences, James Madison University, Harrisonburg, VA 1994.
 153. Hammond-McKibben, D and Nagarkatti, P. S. Regulation of successful immunotherapy of cancer. 14th Annual Seminar of Cancer Researchers in Virginia, American Cancer Society, Virginia Division, held at Virginia Tech, Blacksburg, VA 1994.
 154. Rafi, A. and Nagarkatti, P. S. Role of CD44-hyaluronic acid interactions in lymphocyte cell activation. 14th Annual Seminar of Cancer Researchers in Virginia, American Cancer Society, Virginia Division, held at Virginia Tech, Blacksburg, VA 1994.

155. McKallip, R., Nagarkatti, M. and Nagarkatti, P. S. Immunomodulatory properties of AZT. 14th Annual Seminar of Cancer Researchers in Virginia, American Cancer Society, Virginia Division, held at Virginia Tech, Blacksburg, VA 1994.
156. Bright, J. S., Shaffer, C. A., Nagarkatti, P. S. and Nagarkatti, M. Computer simulation of the immune response. 14th Annual Seminar of Cancer Researchers in Virginia, American Cancer Society, Virginia Division, held at Virginia Tech, Blacksburg, VA 1994.
157. Hammond, D. M., Nagarkatti, P. S. and Nagarkatti, M. Role of adhesion molecules expressed by tumor-infiltrating lymphocytes in successful immunotherapy of cancer. NY Academy of Sciences Conference on Specific Immunotherapy of Cancer, Washington, D.C., 1993.
158. McKallip, R. and Nagarkatti, P. Immunomodulatory properties of AZT. Annual Meeting of American Society for Microbiology, Virginia Division, Blacksburg, 1993.
159. Hammond, D. M. and Nagarkatti, P. Double-negative T cells from MRL-lpr/lpr mice mediate cytolytic activity when triggered through adhesion molecules and constitutively express perforin gene. Annual Meeting of American Society for Microbiology, Virginia Division, 1993.
160. Rhile, M. J. and Nagarkatti, P. Role of Ah locus in the immunosuppression of sensitized T cells. Annual Meeting of American Society for Microbiology, Virginia Division, 1993.
161. Hammond, D. M. and Nagarkatti, P. Characterization of abnormal double-negative T cells from autoimmune MRL-lpr/lpr mice as cytotoxic T lymphocytes. Virginia Academy of Sciences Meeting, Norfolk. 1993.
162. Rhile, M. and Nagarkatti, P. Immunotoxicity of TCDD. Virginia Academy of Sciences Meeting, Norfolk. 1993.
163. McKallip, R., Nagarkatti, M. and Nagarkatti, P. Immunomodulatory properties of AZT. Virginia Academy of Sciences Meeting, Norfolk. 1993.
164. Hammond, D., Nagarkatti, P. S. Regulation of successful immunotherapy of cancer. Annual Meeting of Cancer Researchers, American Cancer Society, Virginia Division, Richmond, 1993.
165. McKallip, R., Rhile, M. and Nagarkatti, P. S. Immunotoxicity of nucleoside analogs used in the treatment of AIDS. American Society of Microbiology, Virginia Chapter. Blacksburg, VA. Nov. 1991.
166. Gote, L., Seth, A., Nagarkatti, P. S. and Nagarkatti, M. TCR-independent activation of cytolytic activity of CTL mediated through CD44. 69th Annual Meeting of Virginia Academy of Sciences, May 21-24, 1991. Blacksburg, VA. (Abstract: Virginia Journal of Science 42:249, 1991).
167. Baldwin, V., Seth, A., Nagarkatti, P. S. and Nagarkatti, M. Effect of immunomodulation by nitrosoureas in the successful treatment of cancer. 69th Annual Meeting of Virginia Academy of Sciences, May 21-24, 1991. Blacksburg, VA. (Abstract: Virginia Journal of Science 42:245, 1991).
168. Seth, A., Manickasundari, K., Nagarkatti, M. and Nagarkatti, P. S. Inhibition of autocrine growth and tumorigenicity induced by T cell clone *in vivo* using mAb against IL-2 and IL-2R. 69th Annual Meeting of Virginia Academy of Sciences, May 21-24, 1991. Blacksburg, VA. (Abstract: Virginia Journal of Science 42:251, 1991).
169. Kakkanaiah, V. N., Nagarkatti, M. and Nagarkatti, P. S. CD4-CD8- thymocytes from MRL-lpr/lpr mice exhibit abnormal proportions of T cells and demonstrate defective responsiveness when activated through the TCR. 69th Annual Meeting of Virginia

- Academy of Sciences, May 21-24, 1991. Blacksburg, VA. (Abstract: Virginia Journal of Science 42:249, 1991).
170. Baldwin, V., Seth, A., Nagarkatti, P. S. and Nagarkatti, M. Comparison of the chemotherapeutic and immunomodulating properties of nitrosoureas. 11th Annual Meeting of American Cancer Society, Virginia Division, held at University of Virginia, Charlottesville, 1991.
 171. Gote, L., Seth, A., Nagarkatti, P. S. and Nagarkatti, M. Tumor-specific CTL can mediate lysis of nonspecific tumor targets when cross-linked with anti-CD44 mAb. 11th Annual Meeting of American Cancer Society, Virginia Division held at University of Virginia, Charlottesville, 1991.
 172. Seth, A., Nagarkatti, P. S. and Nagarkatti, M. Use of tumor-infiltrating CD8⁺ T cell clones in mediating syngeneic tumor rejection. 11th Annual Meeting of American Cancer Society, Virginia Division held at University of Virginia, Charlottesville, 1991.
 173. Gote, L., Seth, A., Nagarkatti, P. S. and Nagarkatti, M. T cell receptor-independent activation of cytolytic activity of cytotoxic T lymphocytes. FASEB Meeting of the American Association of Immunologists, April 1991, Atlanta. (Abstract: FASEB J. 5:A994, 1991)
 174. Kakkanaiyah, V. N., Nagarkatti, M. and Nagarkatti, P. S. CD4-CD8- thymocytes from MRL-lpr/lpr mice exhibit abnormal proportions of ~~TCR~~ ^{TCR} cells and demonstrate defective responsiveness when activated through the TCR. FASEB Meeting of the American Association of Immunologists, April 1991, Atlanta. (Abstract: FASEB J. 5:A645, 1991)
 175. Nagarkatti, P. S., Kakkanaiyah, V. N. and Nagarkatti, M. Lack of self-reactive Vb clonal deletion in double-negative ~~TCR~~ ^{TCR} thymocytes from MRL-lpr/lpr mice. FASEB Meeting of the American Association of Immunologists, April 1991, Atlanta. (Abstract: FASEB J. 5:A648, 1991)
 176. Seth, A., Manickasundari, K., Nagarkatti, M. and Nagarkatti, P. S. Inhibition of autocrine growth and tumorigenicity induced by a T cell clone *in vivo* using monoclonal antibodies against IL-2 and IL-2R. FASEB Meeting of the American Association of Immunologists, April 1991, Atlanta. (Abstract: FASEB J. 5:A1713, 1991)
 177. Nagarkatti, M., Seth, A. and Nagarkatti, P. S. Chemotherapy-induced tumor-infiltrating CD8⁺ T cell clones require CD4⁺ T helper cells to mediate syngeneic tumor rejection *in vivo*. FASEB Meeting of the American Association of Immunologists, April 1991, Atlanta. (Abstract: FASEB J. 5:A1772, 1991)
 178. Nagarkatti, P. S., Seth, A., Manickasundari, K. and Nagarkatti, M. Isolation of autoreactive T cell clones exhibiting IL-2 mediated autocrine growth and tumorigenicity. 73rd Annual Meeting of the Federation of the American Societies for Experimental Biology (FASEB) at New Orleans, 1990. (Abstract: FASEB J. 4:2038, 1990)
 179. Manickasundari, K. Nagarkatti, P. S. and Nagarkatti, M. Mechanism of calcium ionophore induced inhibition of tumor cell proliferation *in vitro* and *in vivo*. 73rd Annual Meeting of the Federation of the American Societies for Experimental Biology at New Orleans, 1990. (Abstract: FASEB J. 4:1949, 1990)
 180. Seth, A., Kakkanaiyah, V. N., Nagarkatti, M. and Nagarkatti, P. S. Isolation and characterization of autocrine T cell clones from normal and autoimmune-susceptible mice having properties distinct from those of Th1 and Th2 cells. 73rd Annual Meeting of the Federation of the American Societies for Experimental Biology at New Orleans, 1990. (Abstract: FASEB J. 4:2107, 1990)

181. Clary, S. R., Nagarkatti, P. S. and Nagarkatti, M. Correlation of the chemotherapeutic and immunomodulating properties of nitrosoureas in the treatment of a syngeneic tumor. 73rd Annual Meeting of the Federation of the American Societies for Experimental Biology at New Orleans, 1990. (Abstract: FASEB J. 4:1950, 1990)
182. Nagarkatti, M., Clary S. R. and Nagarkatti, P. S. Immunotherapy of a syngeneic tumor with tumor-infiltrating CD4⁺ T cells having the properties of Th1 subset. 73rd Annual Meeting of the Federation of the American Societies for Experimental Biology at New Orleans, 1990. Selected for Minisymposium presentation. (Abstract: FASEB J. 4:2021, 1990)
183. Dean, T., Nagarkatti, M. and Nagarkatti, P. S. Immunomodulation by aldicarb of T cell responses to antigen-specific and polyclonal stimuli results from defective IL-1 production by macrophages. 73rd Annual Meeting of the Federation of the American Societies for Experimental Biology at New Orleans, 1990. (Abstract: FASEB J. 4:1764, 1990)
184. Kakkanaiah, V. N., Nagarkatti, M. and Nagarkatti, P. S. Demonstration of unique CD4⁻CD8⁻, J11d⁺, \square TCR⁺ T cells exhibiting NK-like cytotoxicity in autoimmune-susceptible MRL-lpr/lpr mice. 73rd Annual Meeting of the Federation of the American Societies for Experimental Biology at New Orleans, 1990. (Abstract: FASEB J. 4:2107, 1990)
185. Nagarkatti, P. S., Seth A., Manickasundari, K. and Nagarkatti, M. Transformation of autoreactive T cell clones due to IL-2 mediated autocrine growth and their capacity to induce tumors *in vivo*. 10th Annual Seminar of Cancer Researchers in Virginia, Blacksburg, 1990.
186. Kakkanaiah, V. N., Nagarkatti, M. and Nagarkatti, P. S. In MRL-lpr/lpr, the lymphoproliferative disease results from the expansion of unique CD4⁻CD8⁻, J11d⁺, \square TCR⁺ T cells exhibiting natural killer cell activity. 10th Annual Seminar of Cancer Researchers in Virginia, Blacksburg, 1990.
187. Clary, S. R., Nagarkatti, P. S. and Nagarkatti, M. Chemotherapeutic efficacy of nitrosoureas in the treatment of a syngeneic tumor depends on their immunomodulating properties. 10th Annual Seminar of Cancer Researchers in Virginia, Blacksburg, 1990.
188. Nagarkatti, M., Clary S. R. and Nagarkatti, P. S. Tumor-infiltrating CD4⁺ T cells having the properties of Th1 subset can independently cause syngeneic tumor rejection. 10th Annual Seminar of Cancer Researchers in Virginia, Blacksburg, 1990.
189. Seth, A., Nagarkatti, P. and Nagarkatti, M. Isolation and characterization of tumor-infiltrating cytotoxic T lymphocyte clones and their use in immunotherapy of a syngeneic tumor. 10th Annual Seminar of Cancer Researchers in Virginia, Blacksburg, 1990.
190. Manickasundari, K., Nagarkatti, P. S. and Nagarkatti, M. Calcium ionophores can inhibit tumor cell proliferation both *in vitro* and *in vivo*. 10th Annual Seminar of Cancer Researchers in Virginia, Blacksburg, 1990.
191. Nagarkatti, M. and Nagarkatti, P. S. Calcium ionophore A23187, at doses mitogenic to normal resting T cells, inhibits the proliferation of activated T cells and tumor cells. Presented at the 73rd Annual Meeting of the Federation of the American Societies for Experimental Biology at New Orleans, March 19-23, 1989. (Abstract: FASEB J. 3:517, 1989)
192. Selvan, R. S., Nagarkatti, P. S. and Nagarkatti, M. Growth and differentiation requirements of tumor-specific CD4⁺ T helper cells and CD8⁺ cytotoxic cells and cloned T cell lines. Presented at the 73rd Annual Meeting of the Federation of the American Societies for

- Experimental Biology at New Orleans, March 19-23, 1989. (Abstract: FASEB J. 3:506, 1989)
193. Nagarkatti, P. S., Seth A., Kakkanaiyah, V. N. and Nagarkatti, M. CD4⁺ autoreactive T cell clones having the properties of both Th1 and Th2 type of T helper cells. Presented at the 73rd Annual Meeting of the Federation of the American Societies for Experimental Biology at New Orleans, March 19-23, 1989. (Abstract: FASEB J. 3:805, 1989)
194. Dean, T. N., Selvan, R. S., Nagarkatti, M. and Nagarkatti, P. S. Aldicarb, a carbamate pesticide selectively suppresses macrophage but not autoreactive T cell and NK cell functions. Presented at the 73rd Annual Meeting of the Federation of the American Societies for Experimental Biology at New Orleans, March 19-23, 1989. (Abstract: FASEB J. 3:1104, 1989)
195. Seth, A., Udhayakumar, V., Subbarao, B., Nagarkatti, M. and Nagarkatti, P.S. Impaired autoreactive T cell responses in aged mice. Presented at the 73rd Annual Meeting of the Federation of the American Societies for Experimental Biology at New Orleans, March 19-23, 1989. (Abstract: FASEB J. 3:1100, 1989)
196. Kakkanaiyah, V. N., Nagarkatti, M. and Nagarkatti, P. S. Altered thymocyte subpopulations associated with lymphoproliferation in autoimmune-susceptible mice. Presented at the 73rd Annual Meeting of the Federation of the American Societies for Experimental Biology at New Orleans, March 19-23, 1989. (Abstract: FASEB J. 3:1107, 1989)
197. Pierson, F. W., Roop II, R. M., Nagarkatti, P. S., Brown, T. P. and Brown, S. S. Techniques for the rapid isolation and identification of potentially pathogenic strains of *Bordetella avium*. Presented at the 61st Northeastern Conference on Avian Diseases, June 12-13, 1989, Blacksburg, Virginia.
198. Nagarkatti, M., Selvan, R. S. and Nagarkatti, P. S. Role of IL-2, IL-4 and IL-6 in the growth and differentiation of tumor-specific CD4⁺ T helper and CD8⁺ T cytotoxic cells. Presented at the Meeting of the American Cancer Society, Virginia Division, Richmond, April 27-29, 1989.
199. Nagarkatti, M., Seth, A. and Nagarkatti, P. S. Chemotherapy of mice bearing syngeneic tumors with BCNU is effective only in normal but not in irradiated or nude mice. Role of L3T4⁺ and Lyt2⁺ cells. Presented at the 72nd Annual Meeting of the Federation of the American Societies for Experimental Biology at Las Vegas, Nevada, May 1-5, 1988. **Selected for Minisymposium presentation.** (Abstract: FASEB J. 2:661, 1988).
200. Nagarkatti, P. S., Seth, A. and Nagarkatti, M. Expression of J11d marker on L3T4⁺ Lyt2⁺ peripheral T cells of MRL-lpr/lpr mice. Presented at the 72nd Annual Meeting of the Federation of the American Societies for Experimental Biology at Las Vegas, Nevada, May 1-5, 1988. (Abstract: FASEB J. 2:1244, 1988)
201. Seth, A., Nagarkatti, P. S., Nagarkatti, M., Udhaya-Kumar, V. and Subbarao, B. Impaired autoreactive T cell-induced T cell-T cell interaction in aged mice. Presented at the 72nd Annual Meeting of the Federation of the American Societies for Experimental Biology at Las Vegas, Nevada, May 1-5, 1988. (Selected for Minisymposium presentation). (Abstract: FASEB J. 2:1244, 1988)
202. Subbarao, B., Natarajan, M., Seth, A., Nagarkatti, M. and Nagarkatti, P. S. A specific defect in the ability of B lymphocytes from old mice to proliferate in response to stimulation with an autoreactive T cell clone. Presented at the 72nd Annual Meeting of the Federation of the American Societies for Experimental Biology at Las Vegas, Nevada, May 1-5, 1988. (Abstract: FASEB J. 2:1664, 1988)

203. Toney, D. M., Nagarkatti, P. S. and Nagarkatti, M. Comparative efficiency of various nitrosoureas in the treatment of a murine syngeneic tumor. Presented at the 8th Annual Seminar of Cancer Researchers of Virginia, Amer. Cancer Society, Norfolk, March 26, 1988.
204. Nagarkatti, M., Seth, A. S. and Nagarkatti, P. S. Chemotherapy of mice bearing syngeneic tumors with BCNU is effective only in normal but not in irradiated or nude mice. Role of L3T4⁺ and Lyt2⁺ cells. Presented at the Seminar of Cancer Researcher of Virginia, Amer. Cancer Society, Norfolk, March 26, 1988.
205. Nagarkatti, P. S. and Nagarkatti, M. Characterization of autoreactive T cells in MRL mice. Presented at the 71st Annual Meeting of the Federation of the American Societies for Experimental Biology at Washington, D.C., March 29- April 2, 1987. (Abstract: Fed. Proceed. 46:472, 1987)
206. Nagarkatti, M., Nagarkatti, P. S. and Kaplan, A. M. Tumor specific L3T4⁺ T cells mediate both DTH response and tumor rejection *in vivo*. Presented at the 71st Annual Meeting of the Federation of the American Societies for Experimental Biology at Washington, D.C., March 29- April 2, 1987. (Selected for Minisymposium presentation). (Abstract: Fed. Proceed. 46:443, 1987)
207. Udhaya-Kumar, V., Nagarkatti, P. S. and Subbarao, B. Cellular basis of the decreased syngeneic mixed lymphocyte reaction in aged mice. Presented at the 71st Annual Meeting of the Federation of the American Societies for Experimental Biology at Washington, D.C., March 29- April 2, 1987. (Abstract: Fed. Proceed. 46:1368, 1987)
208. Kern, M. J., Nagarkatti, P. S., Kaplan, A. M., and Woodward, J. T cell receptor rearrangements in an autoreactive T cell clone. Presented at the 70th Annual Meeting of the Federation of the American Societies for Experimental Biology at St. Louis, MO, April 13-18, 1986. (Abstract: Fed. Proceed. 45:739, 1986)
209. Kaplan, A. M., Nagarkatti, M., Jones, L. A. and Nagarkatti, P. S. Suppressor T cell regulation of autoreactive T cells. Presented at the 70th Annual Meeting of the Federation of the American Societies for Experimental Biology at St. Louis, MO, April 13-18, 1986. **(Selected for Minisymposium presentation)**. (Abstract: Fed. Proceed. 45:1135, 1986)
210. Nagarkatti, P. S., L. A. Jones, and M. Nagarkatti, and A. M. Kaplan. Demonstration of an autoreactive-antiautoreactive T-T helper cell network. Presented at the 70th Annual Meeting of the Federation of the American Societies for Experimental Biology at St. Louis, MO, April 13-18, 1986. (Abstract: Fed. Proceed. 45:730, 1986)
211. Nagarkatti, M., P. S. Nagarkatti, and A. M. Kaplan. BCNU-mediated rejection of a syngeneic tumor: II. Role of macrophages, NK cells and CTL. Presented at the 70th Annual Meeting of the Federation of the American Societies for Experimental Biology at St. Louis, MO, April 13-18, 1986. (Abstract: Fed. Proceed. 45:716, 1986)
212. Kern, M. J., P. S. Nagarkatti, A. M. Kaplan, and J. Woodward. T cell receptor gene rearrangements in an autoreactive T cell clone. Presented at the Mid-West Autumn Immunol. Conference. Chicago, October 27, 1986.
213. Jones, L. A., Nagarkatti, P. S., Nagarkatti, M. and Kaplan, A. M. Demonstration of an autoreactive T-cell network. Presented at the Mid-West Autumn Immunology Conference. Chicago, October 27, 1986.